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[For the American Bee Journal.]

On the Introduction of Young Queens to Colonies that are Queenless.

Some ten years ago, I was led to suspect that the ordinary statements of Huber and other eminent apiarians, with regard to the antipathy of bees, under all circumstances, to change queens, was incorrect. Eminent writers have supposed that it would not be safe to introduce even a queen cell to a colony until twenty-four hours had elapsed after the old queen had been removed.

In experimenting with Italian bees, shortly after their introduction to this country, I soon ascertained that this was an entire mistake, and that queen cells could be safely introduced, under ordinary circumstances, immediately after the removal of the queen.* This led me to experiment further in the same direction. Supposing that perhaps the hatching of a young queen in the colony might reconcile them at once to her presence, I introduced to queenless colonies cells, the lids of which were being gnawed open by the young queen. In some instances these queens hatched in less than five minutes after the cells were inserted, and I found them to be unmolested, although the hive had been unqueened but a few moments before their introduction.

I now began to suspect that there might be something in the young queens themselves, either in their actions, or in their odor, or their voice, or want of voice, which made the bees indisposed to disturb them. Therefore, after unqueening the hive, I introduced just hatched queens at once, and found them almost invariably well received. The bees would occasionally seem to manifest some surprise at their presence, and probably, if they could have spoken their feelings in words, would have said inquiringly—"does your mother know you are out?"

If the queens were too young, they were sometimes dragged out of the hive, just as imperfect bees are removed by workers. I next discovered that, in many instances, these young queens could be put upon the very comb where the old mother was, and yet be undisturbed by the bees. In order to test this matter more thoroughly, after introducing a just hatched queen and finding her well received, I would place upon the same comb an unfertile queen several days old. The bees would at once attack her furiously, confine, and speedily destroy her. It would seem, therefore, that under ordinary circumstances, young queens which have not yet attained their proper color, and perhaps the power of piping, may be introduced at once to queenless colonies. I have availed myself of this discovery largely, in breeding Italian queens: it being a common practice with me as soon as the queen of a nucleus has laid a suitable number of eggs to test her purity, to cage her, and at once introduce a queen not more than five or six hours old. It may be that it would be safe to introduce queens even a day old, but my practice has been to select for this purpose such as had very recently hatched. When the young queen thus introduced becomes fertile, and has laid a proper number of eggs, I cage her in turn and introduce still another. And thus I am able, with one nucleus, to accomplish in queen raising, as much as is ordinarily done with two or three.

Occasionally I have known the workers to destroy these young queens, if not immediately, still within a few hours after their introduction. I do not, therefore, recommend the practice above described to those who have very few queens, nor would I risk a young queen which I valued very highly. But, as under ordinary circumstances, the breeder has often more queens than he knows what to do with, he can easily dispose of them in the way above described.

In order, at times, to secure a suitable number of queens for this purpose, I have been accustomed to condense into one colony a very large number of queen cells of about the same age, inspecting the colony about every hour in the day, and removing queens as fast as they hatched, and before they had an opportunity to destroy each other or the other queen cells. These same combs may be returned at night to their proper nuclei.

The expert will know how to avail himself of the plans which I have suggested, and how to modify them to suit his circumstances.

L. L. LANGSTROTH.

Oxford, Ohio, June, 1871.

* Instead of the circumlocution of saying—removing a queen from a hive, or giving a queen to a hive—I propose to use as more definite terms, the words, *unqueening a hive, or queening a hive.*

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[For the American Bee Journal.]

BEE-KEEPERS' CONVENTION.

Interesting Discussion in Relation to Bees.

REPORTED BY ROSWELL R. MOSS.

The special meeting of the Southern New York and Northern Pennsylvania Bee-Keepers' Association met at the City Hall in Elmira, April 19th, and was called to order at 11 o'clock A. M., by I. V. Mapes, President. In the absence of the Secretary, Mr. A. D. Griswold was elected Secretary *pro tem.* The Convention remained in session two days, during which the following questions were discussed :

Wintering Bees in-doors or out— Which is the Best?

Mr. Chase, of Allegheny county, had wintered heretofore in-doors, but did not like it; started on summer stands last winter with 102, and now has 98.

Mr. A. D. Griswold built a house at one time to winter—bees would get uneasy, and discharge their fæces about the entrance of the hive. One winter he left the bees out, with more satisfactory results. Now uses a double hive with double walls, and finds that the bees leave the hive as frequently as in single walled; finds the double walls proof against the heat of the sun in summer, and new swarms are less liable to leave the hive. Has a neighbor who wintered in-doors, and was much discouraged.

Mr. J. Hadsell likes an even temperature for bees; thinks they do best in a house cellar, well ventilated, about 25°; if much above that bees become uneasy, and are apt to discontinue work; has had good success the past winter; has lost some, but attributes the loss to foulbrood.

Mr. D. C. Knight, of Allegheny, has wintered with the best success in a house in such a winter as the last. Bees fly frequently and become chilled and lost. Must not be too warm nor too many stocks in a house, as there is a good deal of animal heat in a swarm; thinks a house better than a cellar. Should be without a floor, as a step would jar the stocks; and must be well ventilated.

Mr. John Rowley wintered his in a cellar; thinks they used less honey than they would if left out doors, but finds the comb mouldy; does not know the reason, as it was dry and well ventilated. Put in fourteen stocks.—From one hive that he had out-doors, all the bees left during one of the recent warm days.

Mr. Moore has wintered both in-doors and out; wintered well out-doors by shading the entrance to keep bees from flying.

Artificial Swarming.

Mr. Hadsell has had good success by dividing the frames and putting into a new hive, leaving the queen in the old hive, transferring some young bees and setting near an old stock, some of the bees of which, on returning from work, would enter the new hive.

Mr. Griswold has had some experience in artificial swarming, but has no desire to practice it. If he did, would take the queen from the old stock and place it in a new hive on the old stand. The bees on returning and finding her, would be willing to remain, and commenced building comb, while the old stock would raise a new queen.

Mr. Moore has had good success with the method described by Mr. Griswold.

Mr. Knight has done nothing with artificial swarming; thinks they are more profitable to remain in stock until they swarm naturally. He then puts two or three young swarms together, thus getting a good deal of surplus honey.

Mr. Chase has tried both natural and artificial swarming, and thinks the natural will do for him, certainly, if surplus honey is his object.

When is the best time to put honey boxes in the hives?

Mr. Griswold thinks it desirable to put one box on as soon as the bees will put honey in it, and as often as they will fill it; wants to get all they will make of box honey before the bees commence swarming. On new swarms, waits a few days until the queen gets established below. This prevents her going up and remaining in the box.

Mr. Hadsell puts the boxes on as soon as the hive seems full of bees.

Mr. Moore concurs, and thinks the bees will not get the swarming fever as soon as they would if not supplied.

Mr. Chase finds it quite a trade to know when it will do to put on bees to get the most honey. He uses the American hive, and puts one tier of boxes immediately on a new swarm; raises them when half or two-thirds full and puts empty ones under them, raising the under one as soon as the upper ones are full. Leaves the empty or unmarketable ones on all winter, which the bees will fill as soon as they are able, by which means he gets the greatest amount of surplus honey.

Mr. Knight put boxes on old swarms as soon as the bees commence to stay about the entrance of the hive. On young swarms, puts the boxes on before he hives the swarm; is not bothered by the queen going into boxes, probably on account of his making the new swarms strong by doubling.

What is the most profitable size for honey boxes?

Mr. Chase has made about thirty thousand boxes for sale, of several sizes; finds a box with four glass sides, two of them four by five, and the other two, five by six inches, small posts, the best. The glass is secured by small tins; tops and bottoms of wood; weighs about one pound, and will hold about three and a half pounds honey—two combs. This size sells best in New York.

Mr. Hadsell sells in Elmira; has had bad luck sending to New York. Makes boxes to fit the top of the hive, which he fills with small panes to weigh about three or four ounces. When filled will weigh two and a half or three pounds gross. Buys back the frames, which he prefers to new ones, for five cents.

Mr. Coke thinks for this market the small frames described by Mr. Hadsell the most sala-

ble. Probably for New York it would ship best in Mr. Chase's small boxes.

Mr. Denson finds that the small boxes are best for New York, as the honey will not get dusty; thinks the best form is a single comb box with two glass sides, weighing from four to five pounds. This is considered very aristocratic.

Mr. Knight uses a six inch tube, four glass sides, three combs in a box; has taken such to New York, and they looked and sold better than any he saw there. While in the city he saw at Mr. Thomas', at Washington Market, a sample of small frames which he would not buy, as it was accessible to ants, flies, &c. Thinks that while a greater amount of honey could be obtained in large boxes, yet on account of the better prices received per pound, that in small boxes will make the larger returns in the gross amount of money received.

Best antidote for bee stings?

Mr. Griswold keeps ammonia for the use of visitors. Once when stung himself so as to feel sick at the stomach, he eat a large quantity of honey which relieved him. Others recommended Ray's Salutifer, kerosine oil, an application of spittle, salt, or wet earth or dry or chewed plantain leaves. Several made the statement, that bee stings would after a while, so inoculate the system as to render it less liable to the effects of the poison.

How high from the ground should the hives be placed?

Mr. Hadsell prefers to set them low. From four to six inches from the ground. Bees when heavy laden can get back when they fail to reach the lighting board, if a slanting board is set for them to climb up.

Mr. Knight prefers to have them low as possible without danger from moisture—from ten to twelve inches—for the reason given by Mr. Hadsell. It is easier, too, to take out the surplus honey than having them higher.

Mr. Chase places his on a stand of boards with two inch cleats, thus making the hive three inches from the ground. Puts planing mill shavings on the ground around the hive.

What is the proper distance to place hives apart?

Mr. Griswold thought they should be placed at such a distance, that the bees may not quarrel from mistaking their home, and so the queen may not be lost when returning from the bridal trip from the same cause. If covering a good deal of ground, it is more trouble to manage. If the hives are of different colors, two or three feet will do.

Mr. Knight would have the hives of different colors, and five or six feet apart.

What can we provide in the way of pasturage for bees?

Mr. Griswold has grown Alsike, but the result was unsatisfactory. It might have been owing to white clover being in blossom at the same time. Thinks buckwheat good.

Is there any superiority of Italian over native bees?

Mr. Knight had one Italian queen given him in swarming time. The swarm was cleaned out in the fall. Has dealt in honey gathered by Italians; it is not of as good quality as that of the common bee, probably owing to their gathering from poorer flowers. If they gather enough to more than make up the difference in price, they may be more profitable than the common bee.

Mr. Griswold obtained queens from two noted importations; found the bees unnecessarily quarrelsome, stinging when unprovoked. Not having got any in condition to sell, he had not had a chance, nor does he feel disposed to talk about their good qualities. Of those he had, he soon got rid.

To prevent robbing, it was said that a noxious smell, as of kerosine or coal tar, would keep robbers away, while the other bees would endure it rather than leave their home, but it was thought best to keep the colonies strong; and with weak ones to contract the entrance according to their weakness.

Mr. Denson asked if the use of the melextractor is advisable?

Mr. Knight said it would be if the honey could be sold, which it has been difficult to do, such honey being a drug upon the market.

Mr. Coke has not found strained honey a very valuable article. Any one undertaking the process of working sugar, can make an artificial article that is difficult to distinguish from genuine, and people seem to be afraid that honey offered as strained may not be all right.

Mr. Knight's strained honey sold at ten cents, when his box sold at thirty cents.

Mr. Coke has been experimenting with strained honey to prevent it candying, but has not arrived at a satisfactory result; thinks he may yet. Has restored candied honey by heat, but thinks it darkens its color.

[For the American Bee Journal.]

Novice.

DEAR BEE JOURNAL:—We have so many things to say, just now, June 8th, that we hardly know where to begin.

Our bees are not as strong nor as busy as we had expected to have them by this time, and indeed we cannot tell why, either. During fruit blossoms many of the stocks hung out on their hives, and, to keep them strong, we fed them on coffee sugar and water for two or three weeks, daily. Yet several severe frosts during that time, and quite a drouth since, rather checked brood raising; and we feel sure that we have not now as many bees as we had a month ago. Many of the old bees were lost during cold, high winds, and we have got to look to the now rapidly "rising generation."

Last season we had over half a ton of honey from locust tree blossoms by the last of May, but these were a failure this year. Only a few trees blossomed, and those the bees did not notice.

Our first honey was from hickory tree blossoms—much of it—which gave it so dark a hue that we emptied all our hives, June 6th and 7th (over four hundred pounds) to make room for pure white clover honey, which comes in now pretty well. On the night of the 6th, we had a very heavy, long rain, and as we were very busy, we commenced removing honey early next morning, but were surprised to find the bees—especially the *full blood Italians*—very cross; robbers in abundance, and no bees at work until afternoon, although the day before everything had been tranquility. Why was this? Did the rain wash out all the honey from the clover, so that the bees had to wait for more to be secreted, or were they lazy? It did not seem to us that they even went to look whether there was honey to be had, or not. We were advised to mount the "Railroad Car" (we have really got a railroad car in our apiary to save "sore backs,") and deliver an address to them on the sinfulness of being idle and unthrifty.

The June number is full of good things, but why in the world is there no more said of results of experiments with non-flying fertilization? Has anybody succeeded? (As we hear no response, we shall have to think that all have utterly and miserably failed, as we have.) We have tried all plans given, and some that were not; in darkness, and in light; and light for thirty minutes at two o'clock P. M.; in large cages, and in small; with one drone and with a dozen; with brood, and with no brood; with queens from five days old to twelve. And yet all the satisfaction we ever had was in letting out queen, drones, and all, after the queen was ten days old; whereupon one drone did pursue the queen round and round, in circles larger and higher, until we nearly twisted our neck off in trying to follow them, and stretched our eyes so wide that they have scarcely "got level" yet. We presume that the pursuit is still kept up, with the same alacrity, as we have never seen queen—she was a fine one—nor drone since.

A few days after this we heard most positively that a bee friend had succeeded, and was raising queens "all right," for $2.00 each. We did not sail our hat (we have a new one now, and our better half won't allow it,) but sailed ourselves, *via* horse and buggy, quickly, ten miles to the scene of action. Well, he hadn't succeeded, but—was going to. He had with much pains made a lot of very neat cages, but as he had been successful in raising only about half a dozen Italian drones for every dozen queens, was in a quandary until we gave him since a whole box full of drones—and all the faith we have left.

Mr. Langstroth's sawdust pile only lost us our clept virgin queen, as we felt sure it would, from former similar experiments. If the queens cannot fly, they go "a-foot" and, with us, always away from the hive.

We do *so earnestly* hope that, side by side with this article, some record of success will be given; for since we have recognized the many advantages that are to accrue from success, we feel as though we must succeed. Trusting that the Creator has provided some means of attaining it, as Mr. Langstroth says, we leave the subject.

We regret that a description of our queen nursery did not reach the editor in time for the June number, as we have full faith that it will be a great acquisition. We think that, with it, there will be no trouble in getting laying queens from a single hive every two days at least, thus:

After a stock has started as many queen cells as it will, cover them all with cages as directed, and insert fresh brood. More cells will then be built, as we have repeatedly demonstrated. Cage all these as before, and so on. When the first queen has hatched, let her loose, after covering all the cells. When you see marks of fertilization, or she begins to lay, remove her and let out the next in age. By watching the hive constantly, we are not sure that a queen might not be fertilized any hour, when drones are very plenty. Ours have been fertilized very speedily. In a locality where there are no black drones, we think two dollars, each, would be a great remuneration. The bees will continuously raise queen cells, if supplied with brood, if they have none but caged virgin queens.

On page 269 of the June Journal are some questions for Novice. We are always pleased with questions asked through the Journal, as it indicates that our experience or opinion is regarded as of some weight by *some one* at least.

Our frames are, inside measure, 16½ by 8½ inches. Ten above and ten below. Although the upper story is broader, we prefer inserting only ten frames, as we want as *thick* comb for surplus as can be handled. Taking out frames of comb two inches thick, full of honey, makes us perfectly happy, unless the wire cloth should be so poorly supported in the extractor, that the combs all break down; and then we usually vibrate to the other extreme of perfect misery, until all is made whole again.

Distance across frames (or hive inside) below 14½ inches, above 16 inches. We use the old triangular guide, because our frames were so made; but as we now always have all combs built between two good ones, we should not care much about it.

We never had any honey get really sour; although a little, taken out last year when it was *very* thin, looked much like it, and tasted a little that way, but became much thicker by keeping. We always leave the combs till nearly ready or partly sealed.

We have never scalded any honey, only when it had candied.

Our glass jars were only closed with corks, and were not air-tight.

We are now putting our honey in barrels, for the present. We have been offered fifteen cents per pound for it in that shape; but as that is not more than first-class syrup sells for, we have hopes of getting considerably more. Twenty cents would be as good or better than putting it in jars at twenty-five.

Mr. Quinby challenges Novice, or any one else, to specify where or when he had intimated that L. L. Langstroth was not entitled to his patent and the benefits he should receive for his invention. If we do not word it right, we think the idea is conveyed.

Well, Mr. Quinby, if the public have misun-

derstood you in that matter, we are most heartily happy to hear it, and hope you will correct the erroneous view of your position they have taken from your writings.

We, among others, certainly did think, on reading that same appendix, that the obligation you were under to Mr. Langstroth, for the invention there mentioned, was but faintly felt or recognized by you.

And in your later edition, where you mention the hive that embodies nearly all that is valuable of the Langstroth hive, do you anywhere give him credit for what *he did do?* And when you say, in a note, that no one need write you asking if the hive you advise infringes on Mr. Langstroth's patent, are we not right in presuming that you do not consider or care whether it does so or not? In short, whenever or wherever you speak of movable comb hives, is it not to be inferred that you do not feel any friendly interest in Mr. Langstroth's success in disposing of his invention? We need not tell you that your position in the matter has perhaps greater weight with the bee-keeping community than that of any other apiarian.

We owe to you, too, a great debt of gratitude for your "Mysteries Explained," when we were all in the dark; and, oh, how very happy we should be to see our two great pioneers in our favorite science, Langstroth and Quinby, laboring side by side towards one common end. Even now we need your help. Vainly have we looked for something from Quinby on non-flying fertilization. Cannot his practical common sense aid us?

If we have quoted anything amiss or wrong from Mr. Q.'s last book, we hope it will be excused, as it was burned with the Quinby hive; but the general impression that the public have received, is too often mentioned and quoted to be a mistake.

On page 227, something is said of the yield of honey from the 5,051 hives of the bee-keepers at the Convention in Cincinnati. We then thought, from what we could learn, that perhaps the greater part of those hives were old box hives that had much better been left out of the statement. The yield, Mr. Quinby mentions, was less than seventy-five pounds to the hive; and we have several apiaries here in Ohio, of considerable size, that gave last year twice that amount—that is, with the melextractor.

Two queens in one hive reminds us of a little incident. We have sometimes told our assistant that she would see queens where there were none; and one day she declared she had found the queen of a hive when we had her on another frame; we were about laughing at her, when a glance for ourselves convinced us that she really had a queen too, and a laying one. The frame this queen was on was carefully set in the upper story of the hive, and placed, perhaps, a yard or two from the old hive, while we occupied ourselves, about ten minutes, in preparing a cage for the young one. A lady visitor just then coming in, we mentioned the circumstance, and proposed to show her the young queen. As the stock were pure Italians, no bees had left the frame, and on looking on both sides and seeing no queen, another laugh came in, for sure enough no queen was there. We suggested that our glance had been so hasty we were both mistaken, for if there had been a queen, *where was she?* So the hive was closed up, but it was no use arguing with a woman; she saw her, she KNEW she did. We suppose our lady readers know *that* settled it.

It was so near dark then, that we did not look again (just to please her) until next day, when lo, behold there indeed was her "ladyship," close beside her royal mother (one of Grimm's best), assisting in that highly important and maternal duty of laying eggs, as a dutiful daughter should do. We were so much pleased with the idea of an extra laying queen (it was in April) that we did not hear distinctly some remarks about "being positive," "theory," and "practice."

Well, the young queen "just fitted" a queenless hive, and after proper ceremonies was received very graciously. Next day, on looking for eggs, we were much chagrined to find that our volatile young majesty was off again, leaving no clue (nor eggs). In answer to the suggestion that she had "gone to see her mother again," we with sage wisdom replied that "laying queens *never* left their hives only under the swarming impulse."

"Just look and see, for the fun of it!" Like a woman for all the world! But, as we found her there, on the same comb with her mother again, we shall be obliged to be less positive, in future, in regard to laying down rules in bee-culture. This time we put the old queen in our queenless hive, where she sedately dispenses justice (or eggs), much to the satisfaction of all parties, especially

NOVICE.

P. S.—We are now reminded that there *may be* two laying queens in every hive we open, in spite of all the arguments and theories we can bring forward.

P. S. No. 2.—Why was the extra queen raised? The old one is all right. She came from Mr. Grimm last fall. Cannot some Yankee study up the conditions, so that we can make them do it at pleasure?

About one year ago, we found an extra queen in a hive, which we used elsewhere; and the old one did not fail, nor was she replaced until late in the fall.

[For the American Bee Journal.]

Tomato Honey.

To each pound of tomatoes allow the grated peel of a lemon and six fresh peach leaves. Boil them slowly till they are all to pieces, then squeeze them through a bag. To each pound of liquid allow a pound of sugar and the juice of one lemon. Boil them together half an hour, or till they become a thick jelly. Then put it into glasses, and lay double tissue paper over the top. It will scarcely be distinguished from real honey.

[For the American Bee Journal.]

Novice's Queen Nursery.

Get two pieces of wire cloth about three inches square, cut a small square out of each of the four corners, so as to make two square boxes, with sides three-quarters of an inch high, when they are turned up. Ravel out the wires on each side half their depth, so that the boxes can be pressed into a comb deep enough for the projecting ends of the wires (like a row of needles) to reach the bottom of the cells. Now push one into a comb over a queen cell, and the other on the opposite side of the comb, so that the ends will just meet, and your queen when she hatches is safe, even if the bees cut clear through the comb, as they may do to get at her. Bees enough will hatch inside the cage to take care of her, and you can thus cage all the queen cells in a hive, without cutting a comb, and when removed your comb is uninjured.

When the first hatched queen is five days old, she may be let out until she commences to lay, then remove her and release the next in age, and so on until you have used all, or they are ready for artificial fertilization on any of the plans mentioned.

In this case the queens are always at hand, on the comb where they were hatched, with warmth and young bees, and no places to get fast or to die otherwise. You can put on the cage in less time than to cut out cells, and if on the edge of a comb all the better, as a small corner of comb will serve to hold them, the cages, in place, if they match exactly, which they should do.

We visited a "brother Novice" yesterday, who last season took nine hundred (900) pounds of honey from six Italian stocks, besides increasing them to twelve. We were much pleased with his apiary, appliances, &c. Of course his yield made a sensation in that neighborhood. His great secret of going so far beyond every one else, was that he had read the Journal *over and over until he had it at his fingers' ends.*

He got his Italians as premiums for twelve subscribers to the Journal, and has the combined experience of the leading bee-keepers of our country. Nothing seems to have escaped him that is of any value, and he has energy enough to put what he learns in practice *at once.*

He told us that he had spent the *whole summer* of 1869 in learning to raise queens, and did not get a drop of honey; but we told him the knowledge he had acquired was worth more than tons of honey. He uses the Gallup form of hive.

We told him he had omitted one duty, viz.: *to write* for his treasured Journal, and we shall look for something from him soon. If we have spoken extravagantly, it is because such men are very scarce about here, and we fear they are in other places too. Of course he used an Extractor, and says he never wants any more boxes under any consideration.

One more item. Our assistant has a stock of undeniable hybrids (all her own), and opens them, on an average, to see the queen, &c., *about eight times a week,* (at a rough guess, remember,) and they are the quietest and best tempered bees in our apiary, and certainly as good workers. Remember this, ye who complain of hybrids, and claim that bees should not be "overhauled" so often. The stock that gave us last season three hundred and thirty pounds was opened *invariably* when visitors desired to see Italians at work.

In regard to expedition, if we cannot take fifty pounds of honey from a hive and shut it all up in less time and with less labor than the same amount can be taken off in boxes, and the bees all got out, call us forever

NOVICE.

[For the American Bee Journal.]

Reply to Novice.

MR. EDITOR:—In the June number of the Journal, pages 267–8, Novice, in further explaining himself on the Eureka hive, &c., thinks that in my article in the May number, page 263, I misunderstood him in his remarks on page 206. I *mean* to be understood right, and carefully examine what I do write about. What we both wrote on those occasions is now before the public, and of its judgment I will not complain.

From what Novice has to say on pages 267–8, it appears to me that he has but partially understood me. I hope he will *carefully* read my article again. Having carefully read over a number of times what N. has to say in his last article, and also read what he there refers to, I hope I understand him this time, and wish to make a few remarks concerning it.

Novice's principle, as now laid down, seems to be that our surplus honey must be obtained *in frames* rather than in *boxes.* Now, if that is the best for him, at the head of apiculture, with his tact and knowledge, does it prove that it would be the best for *us,* little folks, before we better learn the trade? And must the best hive for obtaining surplus honey, be struck from existence, simply because it is a box hive—leaving us without one stepping stone between the foot and head? It is the ignorant that need knowledge, and I contend that they should have a chance to obtain it gradually. Now, if Novice will allow us no intermediate steps between "the little and the great," he is evidently in fault. If I were here to introduce for sale the two-story Langstroth hive, with the melextractor (as they need to go together), and also the Eureka hive, I believe I would sell ten of the latter to one of the former. Why? Because the *frame* is so far in advance of what bee-keepers here have practiced, that they are discouraged about trying it. Not so with the latter. Having been used to obtaining honey in boxes, this is not so far ahead but that they would try it, and be benefited. Mr. Hazen has therefore filled a very important link in the chain, and is much to be honored, at least, for his invention. I believe the use of the Eureka hive would be an advance in bee-keeping beyond anything I see practiced around here. So let us have it. Let those that can do better, do it. Fair criticism as to merit and demerit of hives is good, but without showing a fault in a hive, simply slurring it, is not good. When Novice says, speaking of Mr. Hazen's hive, "were his patent hive ventilated, we fear it

would present a sorrier show than even Mr. King's American hive," is he not slurring? When he says Mr. Hazen's articles were published as "*bona fide facts*," is he not slurring? Please give us the facts, if we have them not, and do not give us slurs.

Novice asks, "What has Mr. Hazen invented, or what has he done to further bee-keeping? Answer—what part of his hive was invented and patented by him, I know not, but I do know that he has advertised and described a hive of which he claims to be the inventor, known as the Eureka hive, and the boxes are small, and so made that, when filled, they will show off in the best manner. They are so made and arranged in the hive that, if there is honey to be had and bees to make it, they will surely put it in, and in large quantities. The hive also is so arranged that a large number of boxes can be applied at one time—sufficient to keep the bees at work during one honey season, without overhauling. This comes to us as the doings of Mr. Hazen, as an advancement in bee-keeping. We hope a grateful public will honor him, and we hope this is a sufficient answer to N.'s questions, without mentioning what else he has done.

Speaking of Mr. Hazen's "scattering his articles through the press," Novice says—"Their tendency has been to discourage all real progress or improvement, *with no other design* (the italics are mine) than to advertise indirectly his non-swarmer, as he claims it to be." Is not that a hard saying? Can anybody believe that it can be *all* truth? While all that has been pointed out as against it is, that it is arranged so as to get surplus in *boxes*, rather than in *frames*.

Now I want to talk a little about how it looks to us little folks to follow Novice's way. In the first place we must lay aside our present hives and get the Langstroth, with right to use; then a melextractor; and then, for the want of experience, we should probably make a failure for some years. Then, too, I think Novice has somewhere told us (though I do not see it now) that "we must not mind any quantity of stings, not even a dozen an hour." "*I pray thee have me excused*," many will say, as well as myself. But N. further tells us how to get our honey in frames without extracting it. Simply fill in the otherwise box space with frames. Such frames would not be so convenient to keep from flies and get to market in good condition, as the boxes, and yet if they were small would cost more than the boxes. In getting honey in frames for market, I will leave the public to judge if it is not behind the box system.

What I have so far said has been in connection with the idea that a larger *profit* may be realized, by an expert, with frame hives than with box hives. But does anybody know that while of late there has been great improvement in the quantity of honey obtained from frame hives, there has also been from box hives? while the latter bears the better price.

With my best wishes to all bee-keepers, and my thanks to all who have imparted the information on the subject that they possess. I close. *Bangor, Me.*, June 6, 1871. ALONZO BARNARD.

[For the American Bee Journal.]

Hazen's Patent.

MR. EDITOR:—A correspondent of your Journal writes:—"Nothing certainly could give us *more pleasure* than to learn that Mr. Hazen has made a larger profit from his bees than we have from ours. We rejoice at any one's success with bees; but not in selling the public patent rights for something which they have already. What has Mr. Hazen invented, or what has he done to further bee keeping? Mr. Hazen has for the past six years, or more, scattered his articles through the press, so carefully gotten up that they were innocently published as giving *bona fide facts;* and yet their tendency has been to discourage all real progress or improvement, with no other design than to advertise indirectly his Non-swarmer, as he claims it to be."

This is something like shooting poisoned arrows in the dark, for the writer does not give us his name or place.*

His implications are that Mr. Hazen is fraudulently selling a patent to which he has no right, and pressing the sale by falsehoods, innocently published by the press as *bona fide facts.*

I should take no notice of these remarks, or make any reply to them, did I not think proper to give a short answer to the question—"what has Mr. Hazen invented?" And this would hardly seem necessary to any who have the back numbers of the Bee Journal, with an illustration of the Eureka hive. The three important parts of the hive are the central apartment for breeding and wintering the colony. This, in the medium sized hive, occupies a space of six or more inches wide, eighteen inches deep from front to rear, and sixteen and a half inches high. Comb frames, or bars with side guides, or simple bars, may be used at the pleasure of the operator. If judged necessary from the size of the sheet, a centre guide may pass from the centre of the bar down to the bottom of the hive. Upon each side of the breeding apartment is a chamber for boxes, six inches wide in the clear, eighteen inches deep from the front to the back of the hive, and sixteen and a half inches high. This height is reached by three courses of boxes one upon another, each box five and a half inches high. These boxes are placed with their inner end within three-eighths of an inch of the naked comb, with such apertures at the top and bottom of the box as the operator pleases. This leaves a chamber, eighteen inches square and six inches deep, at the top of the side boxes and breeding apartment, which we call the top chamber. This is the central or breeding apartment.

When the side boxes are removed, we come to the naked comb on both sides of the breeding apartment. On each side we then place a board, eighteen inches long and sixteen and a half inches high, which we call movable partitions. They reach just as high as the top of the breed-

* Novice's real name and residence are, nevertheless, as well known to bee-keepers generally, as those of Mr. Hazen, and it is hardly fair to charge him with shooting *in the dark*.—ED.

ing apartment. Then, with a board or ventilator, or cloth, cover the top of the breeding apartment, and they are doubly enclosed for winter.

My claim allowed me was the combination of the central apartment, the movable partitions, and the side surplus honey boxes—arranged in the manner described.

If this hive and arrangement of boxes and movable partitions was never seen before, I don't know but this may be an answer to the question —"What has Mr. Hazen invented?"

With reference to side surplus honey boxes, as inviting the labor of the bees, I will state—if you will venture to publish my statement as *bona fide*—I have within a few days examined my hives, and have found bees at work in the side surplus boxes, from one to nine boxes in a hive, and yet not in one of the top boxes. I see a reason for it that is satisfactory to me. I place small pieces of guide comb on the underside of the top of the bar at the end next to the bees, and an entrance directly to it. The bees can almost and sometimes quite reach from the comb in the central apartment to the piece of guide comb in the box; whereas they must travel five inches—the whole height of the box—to reach it in the top box.

I have sometimes by accident placed the guide in the outer or distant end of the box and had the box neglected entirely. With a fixed partition between the box and the box that they must pass through to reach, they will be much less likely to begin to store honey at all in the box. This is one important advantage in movable partitions, that they can be taken away and bring the surplus honey boxes square up to the sheet of comb.

I must close this short article.

JASPER HAZEN.

Albany, N. Y.

[For the American Bee Journal.]

Bee-keeping and Patents.

DEAR JOURNAL:—The April number came to hand in due time, freighted as usual with numerous ideas which encourage the novice in bee-keeping, to press forward and emulate the example of those whose experience places them in the advance rank of apiculturists. We like to meet on the pages of the Journal the names of Quinby, Novice, Gallup, and many other true bee-men; and would like to testify our appreciation of their services to the bee-keeping fraternity, by a good, long, strong shake of the hand.

On page 208 I see a very disinterested account of a honey emptier. I use something similar, but Mr. Davis and I will not quarrel about it, for my machine is non-patented also. I hope Mr. D. hasn't a patent hive behind his extractor, to pop up like Jack in the box, when we "address him by letters with a stamp."

If every bee-keeper would use his brains and his mechanical genius (if he has a little of both), he could devise and make his own hives and other appliances during the long winter evenings and other leisure hours. I have but little confidence in those who use your columns as a grindstone to grind some of the gaps out their axes. Their patent traps and long columns of figures would look much better on the last page of the Journal. I claim that such persons are not true bee-keepers. They are patent right salesmen, and keep bees, or pretend to keep them, as a means through which to advertise their wares. Their stock in trade generally consists of a small model hive, printed circulars, *farm rights*, and a smooth tongue. The proper way to meet these men, is for the intelligent bee-keepers to insist upon a trial of their hive for one year. In nine cases out of ten they will not send you a full-sized hive. If they do, of course the hive merits your careful consideration. Bee-keepers should bear in mind that a complicated hive, with many fixtures and moth traps, &c., will prove a curse to his apiary, if he introduces it there.

The hive nature provides, is a hollow tree. Let bee keepers follow out the idea, and study simplicity in construction. Frames can be fitted into a simple box hive. Top storing or side storing cases can be attached to it, if desired. The hive of our grandfather's days, with the *real modern improvements*, is far better than those bearing the high-sounding titles of palaces, &c.

To protect our swarms from the ravages of the moth, we have learned to keep our stock strong. So, to keep this pestiferous, swindling horde of patent right moths form our apiaries, let bee-keepers become strong in bonds of union, in every State, county, and town, throughout our broad land. Then when an invention comes before our Committee on New Inventions, its merit, if it has any, will soon become known to all, with no danger of being swindled, unless a bee-keeper likes the idea of being humbugged, as a great many seem to do now-a-days.

Come, bee-keepers, wake up everywhere, and form societies for the interchange of views and co-operation with our National Convention.

On page 263, Mr. Beckwith discourses upon "My Patent Bee Hive," and Mr. Langstroth's claims as inventor of the movable frames. This is a subject that interests every bee-keeper, and upon which we want more light. I devise and make my own non-patented hives, and my neighbors are adopting my plans. I make a frame as simple as it can be made, by nailing together four pieces of lath. Now, if I am infringing upon Mr. Langstroth's patent, I want to know it, and am willing to pay him for the right to use the frame. As I understand it, the frame was used in Europe, and was public property to any one who chose to use it in this country before Mr. Langstroth procured a patent. My idea of his patent was that it covered some peculiarity of construction of the frame. As Mr. B. says, "we want to know just what inventors claim."

SCIENTIFIC.

Hartford, N. Y., May, 1871.

☞ The movable frame as given to us by Mr. Langstroth, nor in any other practical shape, was not in use in Europe or anywhere else, before he invented it. The case will shortly come up before the courts for decision, and we, therefore, refrain from saying more on that point now. The *Huber hive* is not a

movable frame hive, in the sense of term as used by modern bee-keepers; nor was it intended to be so by its inventor. It is simply an *observing* hive, long since superseded in use as such. No apiarian would for one moment think of using it in practical bee culture, as a movable comb hive, nor was it ever called so till Mr. Langstroth himself happened to dub it so. The *Debeauvois* hive, too, was an impractical structure that never was or could be introduced into use. So utterly was it a failure, that Mr. Hamet, the author of several treatises on bee culture, and editor of the "Apiculteur," has become so strongly prejudiced against movable frames, as to denounce them as involving an impracticable idea—believing, apparently, that as the French inventors have failed in their efforts in this line, no others could ever succeed.

—Ed.

[For the American Bee Journal.]

The Hive Question Again.

I dislike to ask permission to occupy the columns of the Journal again with this subject; but as Mr. J. H. Thomas has asked me a number of questions, either with a real desire to have me answer them, or to try to puzzle me and make my statements appear confused, and has made a garbled quotation of my language to make it seem contradictory, I feel it due to myself to reply, and will try to be brief.

Mr. T. makes a very evasive reply to my statement about the combs breaking down, being careful not to say whether his hives were in the sun or not. To prove that they will not break down in his hive, he says they do not break down in the ordinary box hives, some of which contain larger combs than his. Now, ninety-nine out of a hundred of all the box hives I ever saw had cross-sticks in them, to support the combs and prevent them from breaking down; and I cannot but believe that such has been the case with those in his country. His modest allusion to superior knowledge, I let pass for what it is worth.

Referring to my experience in wintering, he asks: "Were both the tall hives and the shallow ones ventilated *exactly* alike?" No. The ventilation with the Thomas hive, with a hole in the bottom board three inches square, covered with wire cloth, is a peculiar feature of that hive (or *was*, as it has been changed lately), recommended, I suppose, for its "scientific principle." The shallow hives did not have this, and their entrances were left somewhat larger than in the Thomas hive. The top ventilation and covering were as near alike as I could make them.

"There was a large number of dead bees in some of the tall hives. Was this carelessness, too?" No, not that I am aware of, or I would have so stated, for I had no object in view except to state the facts.

"Was it a fact that they contained far more old bees than the other hives?" It was not.

"Why should tall hives mould more than shallow ones?" This question should be in this form: Why did *the Thomas hives* mould, &c.? and even then I must confess that it puzzled me. At one time I thought that that hole in the bottom board had something to do with it; but I hardly think that is satisfactory.

"How is it that Mr. S. says: 'I have no hives patented or unpatented,' while the next paragraph commences with: 'I have made a hive,' &c.?" Mr. Thomas has here deliberately quoted only a part of a sentence, to make me appear inconsistent. That kind of garbling won't win. I said plainly, "I have no hives, patented or unpatented, *to sell*." Is there anything inconsistent with that, and my making a hive for my own use, and recommending it to others? I have neither time nor inclination to go into the hive manufacturing business.

"How is it that Mr. S. has made a tall hive, —frames 14 inches deep," &c. I did not say my frames were fourteen inches deep; the comb in my frames is just twelve inches deep, though I call it a tall hive. The hive I made was gotten up in the winter, before I was aware of the result of the wintering. My experiment only showed that the bees wintered better in the shallow hive than in the Thomas hive. But it does not follow from this that a tall hive, made upon a different principle, is not better for wintering than a shallow one. I admitted the correctness of the theory in regard to the advantages of wintering in a tall hive, and made one moderately tall to secure those advantages, and for the purpose of making it better adapted to placing surplus boxes at the sides,—as I still wished to retain the advantages claimed for this last feature, I have no cause yet to change it. But with Mr. Langstroth's plan I am now nearly satisfied that the shallow ones will winter just as well as the tall ones. Of course I do not consider one experiment conclusive.

I cannot accept Mr. Thomas' proposition to try and beat what his hive has done in St. Catharine's, or anywhere else. No test of hives can be made except upon the same grounds. When one kind of hives give three times as much surplus as another kind, in the same apiary, under the same circumstances as near as possible, for a successive number of seasons, I can very soon decide which is the best for that apiary. If Mr. T. can afford to stick to the tall hive and top box and remain behind the times, while H. A. King & Co., who have so long been the advocates of the same, have, in their latest issues, shortened their frames, put on a second-story of frames, and made arrangements for side surplus boxes; and such extensive manufacturing establishments as the "National Beehive Company," at St. Charles, Ills., have to give their attention almost exclusively to making two-story hives, to supply the demands of progress in this direction (see Bee Journal, vol. VI., page 160),—to say nothing of the many individuals who are doing the same,—I am sure I have no right to complain.

I have no desire to make "a thrust at the Thomas hive without good grounds;" nor do I wish to injure it or its maker in any way. In my dealings and correspondence with Mr. T., I have found him prompt and obliging. But I hold that in the investigation of this subject, whatever experience we may have that we believe will tend to its development and advance-

ment, should be given without fear or favor, regardless of whose personal interests may be affected by it.

THADDEUS SMITH.

Pelee Island, Ontario, Feb. 4, 1871.

[For the American Bee Journal.]

Purity of Italian Queen Bees.

The purity of Italian queen bees has been, and still is, the question in which every queen breeder and the majority of those keeping bees are interested. The country is full of what are called pure Italian queens, and queen breeders are advertising queens warranted pure, prolific, &c.; and, right in the face of all these queen raisers, Mr. Langstroth, who has heretofore advertised the same, says: "There is every reason to believe that the Italian bee is itself a hybrid." How is this? and what does such a warrant amount to? What are we to understand by this purity, if all Italian bees are hybrids? A mulatto is not pure African, neither is he pure white. So with the Italian queen, if she is a hybrid. We must give up and call all Italians mongrels, or else we must call them pure. I am for calling them pure.

I have had considerable experience with Italian bees, and have raised lots of queens. I have also had queens from different breeders, and some were the simon pure; but the majority of them were hybrids, and some not as good as that. A good many writers will tell you that if a pure Italian queen mates with a black drone, some of her workers will show the Italian blood, and some will be entirely black. This I do not find to be so. It may be, as Quinby says, that my bees are contrary. I never yet had a pure queen fertilized by a black drone, that ever produced a worker bee with less than two yellow bands. If I had a queen that had mated with a black drone, and she should produce any black bees, I should be inclined to doubt the purity of her mother. In the American Bee Journal, vol. V., page 83, Querist asks: "The present standard of purity of Italian bees is the three yellow stripes on the worker; but is that a proper test?" I answer, No. I have had queens from a hybrid mother, which were nearly black, which mated with a pure Italian drone, and produced workers which no man could tell from the simon pure. A queen to be pure must produce workers with three yellow bands; yet she may produce such, and not be pure. Therefore we want an additional test, and that is this: *The queen, besides producing workers with three yellow bands, must duplicate herself*; in other words, *her queen progeny must be exactly like herself*, allowing a little for the season.

One of the best queens I ever saw, and as good a one as I ever had, produced queens exactly like herself, and nearly half of her workers showed *four* yellow bands, as they stood on the comb. You could scarcely be aware of their temper, they were so peaceable. There are a great many queens sent out as pure, that are not fit to breed from; though the inexperienced will be satisfied with them, as they do not know the difference, and part Italian is better than none. I received four queens from a certain breeder last summer, which were certainly impure, for nearly one-half of the queens raised from them were black. Yet he advertised his queens as pure. If a queen has the slightest dash of black blood in her, it will show in her queen progeny, although her workers may look well. Black bees are not Italians, and coal is not chalk; but humbugs are plentiful in some localities, and so with impure Italians. In some places pure Italians can be found; in others, Italians can be found to be bogus mongrels, and the bogus are the most numerous.

One word to those who wish to purchase queens. I would say, get a queen that produces all three-banded workers, uniform in color. The drones should also be uniform in color, and the queens from all duplicates of herself. Then you will get a queen worth having; and anything short of this will be dashed with black blood. Such a queen cannot be raised short of eight or ten dollars. Therefore, if you purchase a cheap queen, you must expect a cheap article. We do not raise coarse wool sheep from fine, if both mother and sire are pure Merino; but if there should happen to be a dash of Southdown blood in them, it will occasionally show itself by brown spots on the face and legs. So with Italian bees. If there is any black blood in them, it will show itself in the way of occasionally a queen being dark, or, perhaps, some of the workers will not show more than two yellow bands. Then comes in the humbug cry, "She has met two different drones, one black and one Italian, and is producing bees after both drones. Queens that produce bees after two drones are as scarce as white crows.

In conclusion, I would say, with Rev. E. L. Briggs, in the August number of the Journal: "Then let the price be kept up at paying figures; but send out no queens for breeding purposes but such as are fully up to the standard of excellence; and those who delight in handling this wonderful insect, may not only have the most beautiful, but the gentlest, the largest, the most fertile, and the most industrious honey bees known to the world.

G. M. DOOLITTLE.

Borodino, N. Y., April 8, 1871.

[For the American Bee Journal.]

Introducing Queens.

MR. EDITOR:—On page 233 of the Journal, vol. VI., you give a process for introducing queens, without removing the old queens, &c., and request those experimenting to report.

In 1869, I was very unfortunate in introducing queens in almost every way. I tried all the modes I had read of, and lost at least two-thirds. After losing five out of seven *imported* queens, that cost me a round price, too, I set to work to devise a plan to procure some brood from the remaining two, in case they should be killed, and invented the same trap you describe, or *Queen's Castle*, as you term it, excepting that I

made the sides, bottom, and top of thin boards. I put in this a comb of hatching brood, put the queens in, and as fast as the young bees hatched out, the queens filled the cells with eggs. I watched them very closely for a few days, and was delighted at the prospect, as I thought, of safely introducing my last two imported queens. After six days, I concluded to release one, but first looked over all the combs for eggs and queen cells. I saw none, as I had removed the old queen ten days before, and concluded all was right. I lifted out the *Queen Castle*, took out the frame containing the new queen, set it in the hive gently, and thought I had succeeded with *one* at least; but next morning, I found her dead at the entrance. On further examination, I found a young unfertile queen, that had hatched from a small cell that I had overlooked.

Just here I will say to beginners, when looking for queen cells that you wish to cut out, shake or brush all the bees from every comb that has brood in it, or you will sometimes overlook queen cells that the bees are clustered on.

On the seventh day, I took out the other and last of seven imported queens, and to be doubly sure there were no queen cells or young queens in the hive, I shook off all the bees, examined the combs, and then *run* the bees to see if there was any queen among them. I found none, and set the queen at liberty, as the former. All went well for two days, when I found her in a cluster of bees, almost dead, with one of her antennæ pulled off at the first joint, and she died in a few hours.

Last season, 1870, to gratify the curiosity of my assistant, I put five queens in these castles, and lost four out of the five.

You state it is alleged that queens so introduced are invariably accepted, and the old queen of the colony, or any fertile worker, discarded, &c. If so, why do they not discard the queen when a queen is placed in a hive in a cage? I have, for several years, been in the habit of preserving queens that I had no immediate use for, by putting them in cages and suspending them between the brood combs of any hive that has a fertile queen laying eggs; and have left them so sometimes for two or three months. Last summer I had nine queens so preserved at one time, in one hive, for two weeks, with the queen laying eggs all the while.

On page 231, Mr. Grimm gives his experience in introducing queens. In his first case, had he set the queens at liberty, and closed the entrance so that only one bee could pass at a time, it is my opinion that he would have saved all his queens. I introduce queens as per instructions of Mrs. Tupper, and failed only in one case out of a great many,—and that failure lay to the queen having been taken from a swarm that had settled. I think the queen still had the swarming impulse, swarmed out, and was lost.

Let not what I have here said prevent others from trying the Queen Castle, as many may succeed where I failed. In the early spring, or in the swarming season, I usually succeed in every way; but later in the summer, I find it more difficult.

H. NESBIT.

Cynthiana, Ky., April 11, 1871.

[For the American Bee Journal.]

Introducing Queens.

As this is the season for introducing queens, perhaps a few suggestions at this time will not be amiss. Many of the readers of the Journal know that my favorite method for introducing is the use of tobacco smoke. In my opinion all that is necessary is to scent the bees and queens alike, and there is no trouble. Of all the methods that I have seen in print, I think there is none so good as the tobacco smoke. A few days since I introduced eight queens safely into very full stocks of bees, and was only a little over an hour about it from the time I commenced to look for the old queens. I did it in this way: I gave the bees tobacco smoke to keep them quiet while I was hunting out the black queens. They were all in movable comb hives. All the bees that were on the combs were brushed into a box about a foot square. The Italian queen was put in with them. Then, with my fumigator, I commenced to smoke them and shake them about in the box, so that all would be smoked alike. When they began to look as though they were daubed with honey, (and I presume they were, as the smoke seems to make them vomit,) they were then turned on the frames, the cap put on, and the hive left quiet for a short time, until they were somewhat recovered from the effects of the smoke. Many of them will cluster in the cap, if the colony be a large one and the weather is warm. Should they do so, they are to be shaken down in front of the hive, and left to run in at their leisure. The honey board is then put on, and no one could tell, from the appearance of the bees next day, whether they had been meddled with or not. Nearly all the queens I introduced in this way were accepted by the bees.

The bees left in the hive should also have a good quantity of smoke, but not near so much as the bees the queen is put with. A pint of bees is enough to put the queen with. If this operation is performed when forage is scarce, care must be taken that other bees do not rob them. Just before sunset is a good time to introduce queens in this way.

The honey harvest bids fair to be a poor one here in New England. The apple blossom was light, and white clover is nearly dried up, as we have had no rain for quite five weeks, and no prospect of any at present.

The weather was so cold during the first part of May, we could not raise queens, as the bees would not make cells. We have had some very hot and some very cold weather for the season. Our first queens were sent out May 29th.

Those correspondents who wrote us, and do not give the name of the State in which they reside, must not expect answers. We have received several letters of this kind within a few weeks. One man sent us $2.50 for a queen. He did not sign his name to the letter, or give the name of the State, and yet was in a great hurry for his queen.

H. ALLEY.

Wenham, Mass., June 8, 1871.

[For the American Bee Journal.]

Queen Breeding.

MR. EDITOR:—As it is some time since I contributed aught to the columns of the American Bee Journal on the subject of bee-culture, may I be allowed a short space for a few remarks, on the very important and interesting question of the relative value of naturally and artificially raised queens.

Generally, naturally raised queens, or queens reared when the bees are preparing to swarm, are more prolific and longer lived than forced queens. In searching for a cause for this, we find that when a queen is forcibly abstracted, at an unnatural time, the bees, in order perhaps to shorten the cessation in breeding as much as possible, hasten the process of queen construction by taking a larva several days old. By this means they are enabled to secure a queen in from ten to twelve days, which is from four to six days of a gain on their natural period of incubation. Other things being equal, the hive has a properly developed female bee, every way qualified to perform the maternal duties of the colony, several days sooner than if started from the egg, as is the case in natural swarming.

Now, the fact that such queens are generally shorter lived than those that are longer in maturing, needs no explanation to those who are familiar with the principle in nature, that the life of a being is in the ratio of the time intervening between birth and puberty. Our domestic fowls, for example, will arrive at puberty in one year's time, and their ordinary life time is five or six years. The same is true of the ewe, while the cow and the horse that are two and three years in maturing are two and three times longer lived. Man himself is no exception to this rule. The same principle holds good in the vegetable kingdom. The quince, or the pear on quince root, will bear fruit in three or four years, and will decay and die in from fifteen to twenty years; whereas the pear on its own root will require from eight to ten years to arrive at bearing condition, and its life will be prolonged accordingly. The apple is subject to the same law; some varieties bearing much sooner than others, while their lives are proportionately shortened.

From the foregoing facts it will appear natural enough why a young queen sixteen days in process of development should live much longer, and be every way more profitable, than those forced into premature maturity, to fill the unexpected interregnum. We have succeeded in rearing queens from the egg, by a plan which we have not seen developed elsewhere, which enables us to determine the very day that the young queens are ready to emerge from the cells. The importance of securing the proper development of the queens from the egg, at a time when they can be taken from the hive all at once, is certainly an item of some moment, if we consider only economy of time and labor. The plan is simply this: We deprive a full colony of its queen at a time when forage is abundant. In four or five days afterwards, we take and destroy all the queen cells that have been constructed. We then introduce a pure queen from which we wish to breed, and allow her to remain in the hive two or three days. Then we abstract her a second time. The previously deposited eggs being too far advanced to be available for queens, the recently deposited eggs are used by the bees for that purpose; and, as these cannot vary *in theory* more than two or three days in the time of their issuing, we find that *in practice* there is not even *a day's* difference. If we allow sixteen days for the natural period of development, since the eggs have subsisted for at least two days in the hive, the queens must issue in fourteen days, nor need we expect them any sooner. A practical example of this method last fall demonstrated the truth of this theory, where we took thirteen queens from a hive, barely giving us time to cage them, as they consecutively cut themselves loose from their cells.

The honey season proper set in here on the 22d instant (May), by the blooming of the locust, and it gives promise of a profusion of honey. Out of four days' bloom our bees have had three and a half, and the promise of three or four more. It is impossible for an apiarian to estimate the bloom of the locust too highly. We count one day properly employed, in this extraordinary forage, equivalent to three in white clover bloom. If we were not favored with this remarkable tree in our vicinity, we would unhesitatingly pull up stakes and pitch our tent in a region where the atmosphere is perfumed by its delicious fragrance.

JOHN L. MCLEAN.

Richmond, Ohio, May, 1871.

[For the American Bee Journal.]

Gallup's New Style of Hive.

MR. EDITOR:—Gallup has been foolish enough to get up a bee-hive. Now, I am not going to find any fault with a two-story Langstroth hive for the extractor, yet I did not like the idea of having to take off the upper story in order to get at the lower one, so in the hive I got up, I have obviated that difficulty. I wish to say to all who use my old style hive, that I use the same kind of frame in my new one. I have made seven and put bees in them all. One contains thirty-two frames, and the others twenty-six each.

We find out as well as others, that in order to have the full benefit of the extractor, we must have a large quantity of comb ready built, and we do not wish to vary our style of frame in the least. We wish to get our most prolific queens into the large hives, and want to set them to work to the best advantage. And if we desire to manage the queen on the non-swarming plan, we want a hive that we can do it in. We frequently want to exchange a swarm of bees from a large hive to a small one; and a small swarm can be accommodated in our large hive.

In running a large apiary, we consider it an advantage at present to have different forms of hive, but all with the same frame. In fact the

advantages of our hive are too numerous to even think of, let alone mentioning in one article.

Any one enclosing one dollar will get a full description, so that any mechanic can make the hive; and that is as cheap as I can afford it, as I cannot spend my time for nothing. The hive is covererd by the Langstroth patent, so that any one using it should own a right to that patent.

Those using my old form of hive can make one of the new on trial, and move a swarm, frames and all, into it immediately. The hive is a good-looking one, and is calculated to winter on the summer stand. But small swarms can be placed in the old form of hive, and wintered indoors. There is no humbug about this hive, so send on your dollar and get a description. The cry comes to me from every quarter, inquiring about hives, and I might spend nearly all my time describing the hive; but this I cannot afford without pay.

The season bids fair to be a good one. My bees commenced swarming on the 14th instant. There has been a heavy honey-dew for the past few days. Red raspberries and white clover are coming into bloom. The weather is hot and moist, which favors the secretion of nectar, and urges forward the swarming. In fact the swarming mania is up to the full standard. We had two or three weeks of cold rainy weather, that set the black fellows back early in May; but the Italians kept up their reputation, for the continued breeding up to the full capacity.

E. GALLUP.

Orchard, Iowa, May 26, 1871.

[For the American Bee Journal.]

The Hruschka, and the Italians.

MR. EDITOR:—I procured a honey extractor this spring, and the way it slings the honey is a *wonderment* to the natives. With the old woman in the sitting room running her sewing machine, the slinger going at full speed in the room adjoining, and the old fashioned churn dasher in operation near by, I tell you it sounds like business at our house.

But this honey slinger don't belong to the deparment of poetry in bee-keeping—it is work and trouble. No trouble to turn the gearing, and no mistake about the honey coming out easily and nice too; but to get it uncapped, if capped—to get the everlasting, ever sticking, and never leaving Italians off the comb is one trouble, and not the least one either. Smoke them off on one side, they move over to the other; and undertake to brush them off, you then and there get up an issue. It takes experience, intelligent experience at that, and withal

"For care and trouble set your thoughts,"

with the Italian bees and the Hruschka machine. But I feel a good deal like the old lady, who had raised seventeen children (mostly boys and girls,) and then bought a kettle, and didn't know how she did so long without it! I am pleased with the machine.

The Italians swarmed earlier this spring by ten days than the native brown or black, although much weaker in numbers early in the season. Their hives are generally clearer of the moth-worm. They will not submit to as rough handling as the blacks, without using their sting. On cold days, when opening a colony of blacks, you are saluted with a general buzz, and they raise themselves up on their fore legs as high as their length will permit, yet after a few moments they will submit to almost anything the operator desires. Not so with the Italians, for as soon as they are exposed in cold weather to the light, they go for your eyes. I have frequently opened hives of blacks without the use of smoke, and not in the least irritating the colony. I have never attempted to open a full colony of Italians, without about a pint wanting to sting. To keep them quiet, I have to use smoke, every few minutes repeat, and double the dose. I have yet to find them the peaceable creatures some persons proclaim them to be. Italians are not given to robbing, as the black bees are. Their nature and disposition are to gather stores from legitimate sources. They care but little for broken honey, when anything can be collected from blossoms. It has been repeatedly stated, and I can add my testimony, that they go through the winter with half the number of consumers as the blacks. My Italians became so reduced in numbers last winter, that I was fearful that the cold snap in December would freeze them, but they went through all right.

Some dealers in and breeders of Italian queens claim more superiority for the Italian bees, than they are entitled to. I believe them a superior bee in many respects, but do not subscribe to all I see in their praise.

In searching the hive for the queen, says one dealer, "you can more easily find the Italian, for she is perfectly yellow and can be readily discovered." Introduce an Italian queen to a black colony, and for the first three or four weeks I agree with you. But wait three or four months, until the colony is fully Italianized, and it is just as easy to find a black queen (which, if aged, nearly always has a red cast) amongst black bees, as it is to find a yellow queen amongst yellow bees. Some persons claim for them that, their proboscis being longer, they can gather the sweets from red clover. There are red clover fields in abundance near my apiary, and I have yet to see an Italian bee visiting the blooms, except in the latter part of the month of September, or in October, when, on account of cool nights and dry weather, or other causes, the blooms are dwarfed and diminutive; and then the blacks as well as the Italians are foraging. At this season of the year, the humble or bumble bee, is the only bee I can find on red clover.

WM. P. HENDERSON.

Murfreesborough, Tenn, June, 1871.

I have often seen wasps and hornets at work on the grapes in my father's vineyard, and in others, but never saw a bee attack a sound, ripe grape.—C. SCHROT.

[For the American Bee Journal.]

Raising Queens.

My experience agrees with that of most bee-keepers, that we can raise better queens in full colonies than in small nuclei.

I select a populous stock, containing a queen that I wish to breed from. After removing the queen, when queen cells are capped, or a few days before they are hatched, I cut them out and place them in nuclei, or take a 1½ inch board, make it same size of the frame in the hive, and bore 1¼ inch holes through this board, tack on one side wire-cloth, covering the other side with the same, but in pieces about 1½ inch square, and cover the holes after putting one sealed cell in each.

Remove one of the frames in the hive, and put this board into the hive near the centre. If done early in the season, the cells will hatch as well as if left on the comb.

I have had good success this way, having as many as twelve or fifteen queens in at one time. They were fed by the bees, and sometimes there has been a fertile queen laying in the combs at the same time. These queens can be kept here till a nucleus is prepared for them, or some other disposal is made of them.

I do not claim that this idea originated with me, for I think the same principle has been recommended before. I think Dr. Davis's nursery has some of the same features. My first experience with this method was two years ago.

C. B. BIGLOW.

Perkinsville, Vt., May, 1871.

[We have been using a nearly similar device, for the same purpose, four or five years past. It is a rectangular block, or piece of pine plank, 1½ inches thick, and only about two-thirds as long as the frames in our hives, and is screwed fast to a top bar equi-distant from its ends. The block is perforated by fourteen holes bored *through* with a brace bit. These holes are 1¼ inches in diameter, and are lined on the inner surface with a glazed card board. Within them are inserted cylinders of card board, slightly smaller in diameter and 1½ inches long, with removable wire gauze caps fitted to each end. These are intended for queen cages; and when queen cells for hatching, or queen for preservation, are put in, the block is suspended in a strong colony, between two combs of maturing brood, when practicable. Any cage containing a cell or queen may be readily taken out or inserted, at pleasure.—ED.]

[For the American Bee Journal.]

Queen Raising on the outside of the Hive.

A somewhat novel circumstance occurred in my apiary last summer, showing how strongly the instinct to replace a queen upon the throne, pervades a colony when her majesty is destroyed.

In looking over a colony of black bees for the queen, I noticed in one frame a portion of drone comb, containing drone larvæ in different stages. I removed it; and, in cutting it out, cut with it a few cells containing worker larvæ and some cells filled with honey. I placed it reclining against one corner of the projecting ends or portico of a Langstroth hive from which it was taken, that the bees might take out the honey. (I feared no robbers then.) At the same time I took out the queen, and next day put in a sealed Italian queen cell. I neglected taking the piece of comb away for several days—a week or more. I had previously destroyed all the queen cells that had been started in the hive. Noticing one day a number of bees on said piece of comb on the outside, I took it up, brushed off the bees, and there was a beautiful sealed queen cell, in which was a living queen!

J. S. FLORY.

Fayetteville, West Va.

[For the American Bee Journal.]

A Lady Beginner's Notes.—No. 2.

DEAR BEE JOURNAL:—Like everybody else who embarks in a new enterprise, we are fond of talking about our successes, and the encouraging aspect of things generally, in our particular line of business.

Is industry contagious? Guess not, or else the case of the man who was so indolent that his bees would not work, would have been reversed.

Well, we are determined that our bees shall not catch the idle in this quarter. The 13th of March we added six swarms to the four we told us, and then we had eight swarms in box hives. We had movable frame hives waiting to receive them, but the cold weather compelled us to put off transferring till the 27th.

We'll confess, in a whisper though, we *did* begin before that, and the first move we made was a mistake—gave the bees too large a dose of smoke, and consequently they were in the same condition we would be, under like circumstances. —Couldn't get them up into the drum box, drum we ever so vigorously.

When we began to work right, we got so interested and excited that fatigue and bee-stings were forgotten, till four swarms had taken possession of their new homes. Wonder if all beginners know how much better strips of cane are than strings, for holding combs in the frames? They are easily and quickly put on, with very small tacks; and the bees let them alone till the proper time for cutting them off.

Bad weather prevented our opening the hives till the fifth day after transferring, when we found combs all repaired and fastened to the frames, corners filled with comb, and in several places three and four inches square of new comb, already filled with honey.

If any one has a more encouraging report for the 1st of April, let him stand up. We are using two kinds of movable frame hives, and when experience shall entitle us to an expression of opinion already formed, we'll talk of their relative merits.

Our enthusiasm on the subject of *extracted* honey found quite a cooler the other day. We were visiting a thriving town in southwestern Missouri—(the place, too, where we expected to find a market for almost any amount of honey;) and while talking about honey, our hostess informed us that, a short time before, she had bought a jar of white clover honey and as an article of diet she thought it about equal to varnish! Honey in the honey comb for her, after

that! We found the jar contained liquid thinner than any strained honey we ever saw, and about the color of New Orleans molasses. As to flavor, we could only taste something very like anise, certainly not honey. Said stuff is labelled "*White Clover Honey*," with the name, street, and number of a firm in Philadelphia.

We have a good many thoughts about the unprincipled men who can stand ready with impositions of every shape, but can only say—"there be land sharks and water sharks," and people who would eat extracted *honey* will do well to keep said "sharks" in mind.

SUE W.

Pacific, Mo.

[For the American Bee Journal.]

Amateur, No. 1.

DEAR JOURNAL:—We are of the number of those spoken of by NOVICE, who will drop everything to look over the Journal whenever it arrives. I have been reading it for some time, but have not all the back numbers. Wish I had. Send them along, Mr. Editor, if you can supply them, and I will "foot the bill."

I do "go for" everything on the subject of bees; and now I am "going for" Novice,—in no other way, however, except in "that contention or emulation, rather, of who can best mark and best agree." I have read with interest everything that he has written in the Journal since I have been taking it (two years past), and have received some very valuable hints from him; and as he is but a novice, I hope he will not be offended at "a few small talk."

Well, I wonder what kind of knife that is he has. What, Novice advertise a honey-knife! Yes. Well, here is *mine*, any one can make for himself, out of an old handsaw, by cutting it with a cold chisel, about an inch and a half wide and twenty inches long. Grind both edges sharp, put a handle to it, and you have the best honey-knife ever made,—far ahead of the Peabody. I don't know about Novice's, as I never saw one. But it will accommodate itself to any irregularity of the comb, being very thin and limber.

Well, I suspect Novice uses the Peabody Extractor. It is a good one, but mine is as good. It is a little improvement on Novice's first,—using a wooden frame for the gauze, instead of the wire frame. I like it much better than to have another vessel for the honey.

I wonder how Novice manages extracting when the robbers are troublesome? That has troubled me not a little; but I have a preventive now, in the way of a *wire house*. That is, a frame six feet by eight, and seven feet high, covered on all sides with wire gauze, with a door covered with the same material. The top is of dark calico, to keep off the sun, &c. This house I can move about my apiary, to suit my own convenience. Last year I had to take my frames of honey to the house to get away from robbers. This is too much labor, besides too hot work in a close room, shut up to keep out the robbers. This wire house is as cool as out of doors in the shade. To carry my honey frames from place to place, and to hang them on when examining a stock, I use a rack long enough to hold twenty frames. When full, I take it into my wire house, remove the honey, and return frames to hive.

That troublesome thing of raising queens. I wonder how others manage that. This is my plan: Hive or transfer a strong colony into a hive two feet long, with two rows of small frames, six inches wide and six inches deep, for the nucleus boxes. This hive will hold about thirty of these small frames, and when full, it is an easy matter to keep your boxes in running order from them. Have your queen cells started in strong stocks, and when nearly ready to hatch, transfer them to the nucleus boxes. Put these boxes into the same wire house. I have ten boxes in mine. Distribute them as best you can; they will not interfere with your work, nor with each other. When the queens are old enough, they will come out in their natural way, and mate with your pure drones, which you must see are taken care of in some of the small boxes. This does not interfere with nature at all, and is a sure plan of fertilizing by any drone desired. So far as I have tried it, I have not had a single failure. They all,—queens, drones, and workers,—seem as well satisfied as if they had the whole world for a home, except when you introduce new occupants, who are restless for a while. Of course, you must put feed into the house, so that all may have plenty.

This is ahead of any plan I have ever yet seen recommended, and I claim that the arrangement will not fail when properly managed. I have never heard of the plan before, nor seen it suggested anywhere, and hope others will try it, as the arrangement is not patented,—nor will it be, I suppose.

A more speedy way is to raise the queens in a nursery, and when they are four or five days old introduce them to queenless nuclei,—being careful, however, lest you have them destroyed.

Wishing for more light on our pet subject, and hoping all will try to improve, is the sincere desire of an

AMATEUR.

[For the American Bee Journal.]

Honey Dew.

On the fourth of this month I noticed that the leaves of a young chestnut tree in front of our house were covered with honey dew, on which my bees were hard at work; indeed, they are still working on it, although we had a hard rain yesterday, which I hoped would have washed it off. I say *hoped*, because the bees seem to be so demoralized by finding honey in such unusual places, that they will hardly allow me to use my extractor; perfect swarms of them getting on the machine, and into the honey after it is extracted.

The honey is beautifully clear, and of good consistency. On examining the tree, I found the under side of the leaves covered with small green

aphides, about the size of a large flea and of very much the same shape. The "dew" was evidently voided by the insects; there being none of it on the under side of the leaves and no aphides on the upper side, as there would have been had they been eating the "dew." I have since heard that the trees for several miles around us are full of it.

We have had one of these long dry spells of weather so favorable to insect life, which, coming so early in the season has, I suppose, caused a great increase of the aphides, and consequently a very general honey dew.

DANIEL M. WORTHINGTON.

St. Dennis, Md., June 13, 1871.

[For the American Bee Journal.]

A Strange Occurrence.

MR. EDITOR:—I have a question to ask you or some of the readers of your valuable Journal, which is this:—

On the 7th of this month, June, a swarm of Italian bees issued from one of my hives, and lit on a pea vine in the garden, near the ground. I took a hive there, which had been painted about three weeks, after inserting three frames of brood, bees and all, to give the swarm a start, —it being an afterswarm. When I set the hive there, about the half of the bees went in themselves. About this time, I observed that they were taking the "blind staggers," as I thought. They would crawl around, drag their hind legs on the ground for a few minutes, and then expire. While the bees were crawling in, so many of them died before the entrance, that I had to scrape them away to give the others a chance. After all were in, I put the hive on the proper stand, well ventilated. Next morning, to my great surprise, I found more than half the bees were dead, and among the dead ones I found the queen, which was a virgin. Now, if any of your readers have experienced anything of this kind, I wish they would tell the reason why, and oblige

E. J. WORST.

New Pittsburgh, Ohio, June, 1871.

☞ The mortality here was probably caused by the paint, though a better judgment could be formed if we knew what kind of paint was used, and whether any was applied to the interior of the hive.—The symptoms resemble much those given by the Germans as attending what they call the "*Toll-krankheit*,"—a bee disease of which, fortunately, we have no experience or knowledge.—ED.

Eager youth and greenhorns are prone to fancy that the surest way to get upon a pedestal is to push somebody else down. But there is room for all who are at all worthy of conspicuousness; and the bustling booby, as well as the contriving knave, is sure to sink to deserved oblivion at last, despite of awkward efforts or cunning schemes.

[For the American Bee Journal.]

Large Number of Queen Cells.

I have seen several statements of large numbers of queen cells found in a hive, though less in number than in my own knowledge. My desire is not to bring before your readers a larger story or exceptional cases; but to show that the number of cells depends much upon circumstances. Three or four years ago, I received some imported queens for Mr. Langstroth. The choicest one I put in a single frame observing hive, and after a few days forwarded her in a small box to Oxford, Ohio. Mr. Langstroth had requested me to send eggs to Mr. Cary, at Colerain, Mass. I sent him the frame. The following day he had a swarm issue, which he deprived of its queen, and gave it the frame, placing the hive on the old stand. In due time he found forty-eight (48) queen cells. This number would not have been made, if the frame had been given to the swarm as it was; but by cutting the comb irregularly increased space was given for the formation of cells, which induced the bees to build a greater number—a fact well known to old queen-raisers.

Another case. Last season I noticed an unusual commotion about one of my hives, and saw three young queens run out within a minute. I then decided I would cut out cells and give them a queen from a nucleus, and was surprised at the number of cells I found. In all examinations I carry a box to save wax scraps, and dropped in the cells as I cut them out. Some of the queens emerged in my hand, and when I had finished there were a number of queens crawling about the box and trying to kill each other. On counting I found one hundred and nineteen (119). This was a hybrid Egyptian swarm; but I think under similar circumstances, the same number—if not more—might be obtained from any other strong colony. This hive had been made up the year before from combs taken from several stocks, and places favorable to the formation of queen cells were much increased by irregularities in the combs, that would not be found in a hive under ordinary circumstances—that is, where the combs had been built as they stood. The queens were as large and active as when a smaller number are raised. The strength of the colony and the state of the honey harvest also influence the number of cells which will be formed.

EHRICK PARMLY.

New York, April, 1871.

Velocity of Insects during Flight.

M. E. Marcy has made some curious investigations on this subject. The result of his experiments, allowing, in regard to accuracy, from a variety of disturbing causes, was to show the following number of beats per second, for the wings of each insect. The common fly, 330; the drone, 240; the bee, 190; the wasp, 110; the hawk moth, 72; the dragon-fly, 28; and the cabbage butterfly, which is inaudible, nine beats per second.

[For the American Bee Journal.]

Modes of Investigation.

MR. EDITOR :—I believe I have never intruded upon your columns, notwithstanding I am the possessor of over a hundred colonies of bees, and have made the study and practice of bee-culture a specialty for several years past. To commence, will say that, thus far, my experience is that the greatest difficulties new beginners labor under arise from the conflicting opinions given as facts in the books and papers; and the only safe way to succeed and to avoid becoming discouraged is to "make haste slowly." Then, after hearing what others have to say on the various subjects under discussion, apply the test of reason to such assertions as are not backed by established facts, and, if up to the standard of probability, further test by experiment. By this course one can at least claim the right to an opinion of his own; and by comparing notes much useful practical information may be collected.

Among the unsettled questions of the day, the following will be put to the above tests again this season by me, and the results noted for future reference :

First.—Artificial impregnation of queens by confinement.

Second.—The Italian bees as compared with blacks.

Third.—The use of empty combs given to new swarms, compared with no combs furnished.

Fourth.—Artificial swarming compared with natural; and

Fifth.—To which side of the drone question I belong?

At present, I acknowledge my scepticism in the first, and doubt its utility or even practicability.

The second, doubtless, will not maintain the standard given it by many, yet am favorably impressed with the Italians and expect *satisfactory* results. I am an advocate of the empty comb system, whenever combs can be procured. Even cell bases are better than no start at all, in my opinion. As to artificial swarming, I believe the best and only way to make it a success, is to do it long before the natural swarming season; otherwise nature's plan is best. At least this is my opinion. Am warm on the third proposition.

F. BREWER.

Waynesville, Mo., May 8, 1871.

☞ Another question which our correspondent could place in his curriculum for the summer might be this—Is it well or wise to accept Ayres' or Hostetter's almanacs, a *smedical periodicals*, and look to them for disinterested and useful information in hygiene?

Nothing is wanting but good hives, good pasture, cleanliness, and attention to insure a rich reward to those who engage in bee culture; but training is quite as necessary to the full comprehension of the occupation, as it is in the trade of a carpenter or shoemaker.—MRS. GRIFFITH.

[For the American Bee Journal.]

More Light Wanted, &c.

MR. EDITOR :—For information's sake I would, through your Journal, like to have a little more talk with Mr. A. Grimm. In the May No. of Vol. VI., page 243, he has kindly furnished me and the public an answer to my question whether "the allowed superiority of the Italian bees over the black bees was a *natural quality*, or only the result of improvement." He affirms it to be a natural quality, and cites as proof that for the last four years he has bought all the black colonies in his neighborhood (to get them out of the way), and brought them home. "Treated them exactly like the Italians, they have, nevertheless, in every instance, fallen greatly behind in productiveness." This is not quite definite enough. When he says that the black bees received the like treatment with the Italians, we presume he means after they were received by him. We wish to ask him if, before he bought them, they had been cross-bred with black bees of other apiaries, or even with other hives in their own apiary? Whether, in breeding them, pains had been taken to breed from the most prolific queens, and also from the greatest workers? (This has been done with the Italians, not to mention other improvements.) If not, his comparison is between *un*improved black bees and *improved* Italians. Of course it does not touch the merits of this question. Either both must be unimproved, or each receive the same improvement, and then the comparison will be just.

From accounts in the Bee Journal, I believe that most of the Italian bees in this country have been much improved (for which I am heartily glad). I believe the black bees capable of as much improvement (which they have not received); and when they have received it, they will not be inferior to Italian bees.

ALONZO BARNARD.

Bangor, Me., May, 1871.

[For the American Bee Journal.]

Inquiry for a Good Honey District.

MR. EDITOR :—Having become wearied with professional life, I was induced by the various representations through the journals, and books on apiculture, to give bees some attention. And after several years' study and attention, with the *rights* and *agencies*, and the *use* of the most approved inventions and facilities, I have become greatly attached to my new vocation, and would be greatly obliged to the numerous contributors, or any one of them, who could direct me to a locality where I can certainly, without feeding, receive an average yield of forty or fifty pounds of nice box honey, per hive, and without endangering the lives of my colonies.

I have now twenty colonies at the home apiary, which have given off but one swarm (Italian), and no box honey yet; and I have deliberately concluded that it is no use in trying to make

bees pay in this place. Hence. I am very anxious to hear where I can certainly do as well as many who contribute to your Journal.

It is far from my wish to discourage any one in this interesting and instructive science; but I love *truthful* representations, and unless I can hear of a better locality than this, I am sure to discredit most who make such boasted representations through the Journal.

Let me have the locality where I can realize half the success of the many who crowd your pages, and oblige

W. F. BASON.

Haw River, N. C., May 23, 1871.

[For the American Bee Journal.]

Cure for Bee Sting.

MR. EDITOR:—I am sorry to hear of death caused by a bee sting, when there is a remedy so simple. Mr. Gallup first spoke of it in the Journal, and it has been tested in our own family with perfect success.

One year ago I was working with hybrids, very near the house. They were very cross, and the day was exceedingly hot. My mother-in-law went to the cistern for water, and one of the bees attacked her and stung her on the head—probably on a vein. She was very warm at the time, and immediately felt a prickly sensation from head to foot; and some large red spots made their appearance all over the body. My wife advised a wet sheet pack, which was applied. She remained in it somewhat over half an hour; then got up and felt no more ill effects from the sting. It certainly will cure if applied very soon after being stung. If you think best, please publish this.

J. L. PEABODY.

Virden, Ills., June 6, 1871.

[For the American Bee Journal.]

Notes from Kentucky.

MR. EDITOR:—Thinking a few notes from this part of the country may be acceptable, I may try my hand.

Our bees to-day (June 6th) are gathering honey more briskly than at any time this season. Owing to the heavy frost that did so much damage in this section, our locust bloom was cut off, or very much shortened. The 19th of May was the first day bees generally gathered at all briskly.

Notwithstanding the unfavorableness of the season, we have a colony that threw off a *very fine* large swarm on the 17th of April. Upon examining the stock to see what it meant, we found brood in all *ten* cards of comb in a Langstroth hive. Where there was no brood there was honey. The outside comb contained a good deal of *sealed honey*. This swarming was from a month to six weeks earlier than common. At present, with about two hundred stocks, we have had only ten or twelve swarms. Swarming seems to have commenced slowly at last.

I think the "*Hruschka*" will be of great service in giving queens more room to lay, and perhaps in taking honey from stocks that show too much disinclination to store in boxes. We hope, from present appearances, to have a good honey harvest. Comb honey is most in demand in this section. We sell some extracted honey now and then. We shall barrel up the honey from the machine this season (when we get it), and feed or sell it, as we think best.

We say, do not let any one that wants much honey, fail to *feed his bees in the spring.*

Will Mr. Quinby not tell us where to obtain the indestructible combs he somewhere speaks of? We would be glad to hear what *he* himself *knows of them*—price, and how to get them.

I must close this scrawl, with many wishes for the success of our Journal, I remain

A SMALLER NOVICE.

Lexington, Ky., June 6, 1871.

[For the American Bee Journal.]

Letter from Minnesota.

MR. EDITOR:—Not seeing any correspondents in the Journal from these parts, I thought I would try my hand. If you do not find my communication worth publishing, you can burn it, and no offence will be taken.

We had a pretty early spring. Bees commenced swarming the earliest I ever knew them, the first Italian swarms I heard of coming out on the 22d of May, and the first black swarms about the last of that month.

I played smash with my apiary last year, in my attempts to Italianize; and it will take all this summer to get up to where I ought to have been last fall. I set out thirty-three swarms, many very weak, and have lost three queens this spring. My strongest Italians swarmed June 9th. I think my black bees have not yet commenced preparations to swarm. I shook out six black swarms last Saturday, using surplus Italian queens. After shaking out two swarms about noon, the Italians were attempting to rob, so that we had to stop operations and use smoke to drive away the robbers. While puffing smoke at the entrance of one of the hives containing a new swarm, I saw a large black queen on the alighting board. Supposing that she had just come out of the hive, I poked her back, and next morning found her dead on the alighting board, close to the entrance of the hive, surrounded by a cluster of bees. I thought it strange that they should kill their own queen, next morning I examined the hive and found no eggs; gave them a queen cell. Yesterday, on examining again, I found the queen cell destroyed and an old black queen and eggs present. *Question*—Had two queens been in the hive all winter? If not, where did the extra queen come from? The same night (Saturday), after shaking out the other four swarms, I found I had not got the old queen with the new swarm, although I had shaken all the bees I could from every comb in the brood chamber. Would an old queen leave her hive and enter another,

without being accompanied by a swarm, and that too when there were no queen cells started?

One of my neighbors has disposed of all his Langstroth hives and uses the American. He thinks they are far ahead of the Langstroth. He does not use the extractor, and has never sold much box honey—having made his profits by selling swarms. When that plays out, as it must in a few years, and he has to depend upon surplus honey for profits, he will probably begin to see some of the disadvantages of his system.

Another neighbor bought two Kidder hives, because he could get them cheap—$1.50 each. He thought he would like them better than any other. I saw one the other day. I find it more trouble to handle the frames of the empty hive than it is to handle the frames in a Langstroth hive when full of combs and bees.

I heard, the other night, of a way to prevent after swarms without destroying the queen cells—namely, put the new swarm on the old stand and remove the old hive to a new stand. I do not know where the idea originated, but it comes to me from Mr. J. H. Locke, of Clearwater, who, I understand, practiced it all last summer without a failure.*

S. ROWELL.

Silver Creek, Minn., June 14, 1871.

* This is a common practice among bee keepers who use the old box or basket hive, and is generally successful.—ED.

[From the Cincinnati Ruralist.]

Bee-keeping around Cincinnati.

There are several old bee-keepers about Cincinnati, old fogies and progressives, some who know too much to learn any more, some who like to improve at reasonable speed, and some who are so fickle-minded that they adopt every new thing that is called an improvement, and, wasting all their time in experiments, never come to any profitable result. New beginners, like new converts to religion, are generally most zealous, and are full of new inventions. On a visit to one lately, who had just obtained a Langstroth hive with a swarm in it, I found him seriously considering how he would put on the upper box a pair of cast-iron handles. Thinking that upon some occasion he might wish to use it upside down, he was at a loss how to place them, whether right side up or the contrary. I asked him if he could not lift the box without handles. O yes, he said, but he wanted to have it handy both ways. Perhaps he will patent it.

This reminds me that Dr. J. W. has at his drug store a model of an apparatus, which is a most astonishing remedy for the *Behemoth*. When the chickens go to roost at night, their weight on the perches puts into movement a system of levers and slides which closes the entrances to all the bee-hives, and then Mrs. Moth can't get in without she goes in before roosting time. This is patented. Mr. W. can tell something about it, and maybe sell rights.

One of our oldest bee-men is Mr. T., who came here many years ago from New York, I think. He has long experience, and perhaps knows as much about bees as any man can know by keeping them in the old boxes. He has, I believe, always refused to adopt the frame, but has been a successful manager. I have been lately told that he is, at last, about to adopt both the frame hive and the Italian bees. I expect to hear shortly that he is thinking about a honey slinger. Although he has been in the business thirty years, to my knowledge, and sold, I suppose hundreds of swarms, his stock has entirely run out, and he is ready to begin anew in a better way.

Another old fogy about here, Mr. D. L. S., has had bees in the family ever since he was born, and he is now sixty-five or seventy years old. If you visit his place you will see two stands, containing perhaps one hundred boxes each, another empty and turned into a chicken house, and an old out-house containing one or two hundred more. In 1868-9 he lost about seventy swarms—all he had. That could not be helped, as almost every bee-keeper suffered more or less by the unusual condition of things that season. He afterwards sent five hives up into the centre of the State, and got them filled with Italian swarms. Unfortunately, he sent his old style of hives, and more unfortunately still, he will not study them. He is afraid of bees after being acquainted with them all his life. A friend and myself went out to see his Italians and examine his hives, but we could not get him nearer than about thirty feet from the hives. He stood there with his hands in his pockets, ready to run. The first bee coming towards him started him.

He gets his honey by driving up a hired man to take off the boxes. He is a hopeless case. H. G. of Clifton, is a white horse of another color. He began about twenty or twenty-five years ago with an old rattle-trap of a non-swarming and dividing hive, or something of that sort, which I believe was given to him by its former unsuccessful owner. Being of an inquiring turn of mind, and every way fitted for the study of bee-ology, he has kept up with all the improvements, bought and tested many contrivances, some of which turned out to be the reverse of improvements, until some ten years ago he came across the Italian bees and the Langstroth hive. He personally visited Mr. Langstroth at Oxford, and bought of him his first queen. He has many of her descendants at work. He has not made a money making business of bee-keeping, but after selling and giving away thirty or forty swarms, losing in '68-9 sixty-five swarms out of seventy, selling and giving away about fifteen since, he has fifteen or twenty on hand. He knows pretty much all that is known about bees. He might perhaps find out something by taking the *American Bee Journal;* but in a general way you may say of him, that what he don't know about bees is not worth knowing. If you want to talk bee to him you must not consume more than an hour each day, for his brother looks upon bees with much disfavor, and (*his hobby being fishing,*) thinks that time spent in talking about or working with bees is worse than wasted. With him *fishing* is the only sensible pastime.

J. L. is another old fogy, living beyond Brigh-

ton. He has had some bees perhaps twenty years in old style boxes. He has the best pasture for bees in this part of the country; but after going as high as twenty swarms on hand at once, he has at length dwindled down to two. He always gets the first honey and first swarms, and this year has taken off, by the 10th of May, fifty pounds from his two hives; yet with all his advantages, he has dwindled down to two swarms. He at last shows signs of vigor, for he begins to inquire for the Langstroth hive, &c. With improved means and his excellent pasture, he might be the most successful bee-keeper about here.

The honey locust* is now in bloom (May 13,) and has bloomed for some days, but many in low grounds were nipped by frost three weeks ago, and the yield of honey may be small from that source. In this neighborhood this is one of our chief dependencies, and the only good one till the white clover comes in some weeks later.

Those who have only two or three swarms, especially in the old style hives, will use boxes for their surplus honey. But those having five or six, or more, with frames, would do well to inquire about, if they do not buy, a melextractor. There are several kinds advertised, and all are efficient; but of course there are preferences. A few days ago I saw Mr. Langstroth and one of his acquaintances, the oldest and the youngest bee-keepers of the neighborhood, at the tin-shop of Mr. Stevenson, on Main street above Fifth, examining a melextractor or *honey slinger*, as Mr. S. has properly named it, which embodies some improvements not yet adopted by others. Mr. Langstroth expressed himself so much pleased with its plans, and requested Mr. S. to send him one as soon as he could. Mr. Langstroth seems to be recognized as one of the chief, if not *the chief*, bee cultivator and hive improver of the country. The Honey Slinger, or Rusher, as it might be called from the name of its inventor (Hruschka) is, I believe, a German invention in its principal features. All the different kinds made here are only variations from the original, and some perhaps are improvements. As I never saw a description of the original, I cannot say. Most bee-keepers have seen the cuts of those made in this country advertised in the bee journals, and should make themselves acquainted with their different features and general use. The produce of each swarm may be increased two to four fold by the use of the Slinger. The extracted honey should be put up in such jars of one, two, or four pounds each, as may be used for putting up fruit after the honey is used up. The idea of chawing up a comb to get the honey out, thus making a melextractor of your teeth or gums, is about played out and might as well be discontinued.

B. I. DRONE.

* We presume that the *Robinia pseud-acacia*, and not the *Gleditschia triacanthus*, is the tr e here spoken of—[ED.]

The sweet sap that exudes from vegetable pores, and which is accumulated in the nectary of flowers, serves alike to sustain the bee and to render the seeds of plants fit for germination.

[For the American Bee Journal.]

Still Another Bee-Feeder.

As quite a number of bee-feeders have been described in the Journal, we thought we would give another—believing it to be the best ("of course.")

We use the Langstroth hive. On the underside of the honey-board we tack a piece of cotton cloth, six or eight inches square. A hole of suitable size is made in the honey-board, through which to pour in the feed. The cloth is allowed to sag a little, or the honey-board can be cut out a little, where the cloth goes on.

With this feeder we can feed at any time, without disturbing the bees; placing the food where it should be, directly over the cluster. It is simple, costs but little, and is easily made.

Our objections to the Hershey feeder, and the like, is that it tends to divide the cluster. Bees do not cluster around their honey, and why should they around other food.

We have tried a feeder recommended by Mr. Quinby, but the bees did not come up through the honey-board in cold weather; and besides, it gave more air space than is needed when we are feeding.

☞ No patent on this!

LE SAYE.

June 1, 1871.

[For the American Bee Journal.]

ONE MORE ON THE LIST,

and one more lady with "bee on the brain." I became afflicted with this malady in April, 1870, while assisting in transferring twenty-four colonies from the box hive to the movable frame hive, and now, May 10th, 1871, finds me still studying the "busy bee"—for the more I learn the more I want to know. I think the hive an inexhaustible fountain of mysteries, one into which I feel myself incapable of entering, except by the light and aid of others; but should I discover anything in after years, that had escaped the eyes of others, I shall be only too glad to communicate it to all bee-keepers. I am a young lady (not yet old enough to vote), and finding more to interest me in the "hive," than in the "school-room" as a teacher, I have turned all my attention in that direction. I have attended one "Bee Convention," and hope to meet with my friends at Cleveland.

I shall be glad at any time to welcome you to my home and apiary. Very truly,

(in) EARNEST.

☞ The lady has omitted to give us her address, and the postmaster who mailed her letter managed to make his official stamp perfectly illegible. May ample success in bee culture serve to unravel the mystery, long before the "vexed" and perhaps vexatious question of female suffrage receives its quietus, *pro* or *con*.

In the hive bee the maternal instinct exhibits itself as an energy diffused through a multitude of individuals.—*Shuckard.*

THE AMERICAN BEE JOURNAL.

Washington, July, 1871.

VOLUME SEVENTH!

☞ We commence another volume of the Journal with a still growing subscription list, though one yet short of what is needed for the adequate support of such a publication, unsustained as it is, and ever has been, by profits derived from the sale of humbug patent hives. We believe it is generally conceded that the last volume is an improvement on its predecessors, and we design that the present shall be a further advance in usefulness and interest. As the most efficient means of fostering our efforts in that direction, and securing satisfactory results, prompt renewal of subscriptions and payment of arrearages are respectfully solicited.

☞ Shortly after making the discoveries as to the safe introduction of young queens to queenless colonies, as stated in an article in the present number of the Journal, Mr. Langstroth communicated them to us by letter. We trust that restored health will enable him to be a frequent contributor to the Journal henceforward.

Dr. T. B. HAMLIN, of Edgefield Junction, Tenn., President of the Tennessee Apiarian Society, who has long been actively engaged in bee-keeping, has issued a "*Practical Treatise on Improved Bee-culture*," adapted to the wants of the South, and designed principally to aid beginners. It is a neat and convenient manual, and its instructions, so far as we had leisure to examine them, are brief, simple, and plain.

☞ We have received from the composer, Mr. Karl Merz, of Oxford, Ohio, the music of "*a Bee Song, a quartette for mixed voices.*" We must beg, however, to let others judge of its merits, for as Shakspeare has it, "there's a vice in our ears" which wholly disqualifies us for criticising sounds and tunes, crotchets and quavers.

"Our destiny severe,
Though ears she gave us two! gave us no *ear*!"

The Wise Man has remarked—"Is there anything whereof it may be said, See! this is new? It hath been already of old time, which was before us." The history of bee-culture furnishes some queer illustrations of this. We have lately obtained an old German treatise on bees and bee-culture, which is really quite a curiosity and a treasure in its way. It was originally published in 1568, by Nicholas Jacob, a Silesian bee-keeper, whom the Baron of Berlepsch regards as "the greatest apiarian of his day," and is substantially an older work than that of Butler, which was first issued at Oxford, in 1623. It was reprinted at Gorlitz, in the Upper Lusata, in 1601, by John Rhambow, and republished in 1614, with modifications and illustrations by Caspar Hœffler, whom Berlepsch calls "the greatest bee-master of the 17th century." This edition was soon exhausted, copies were so scarce that none could be got from the booksellers, and the Rev. Mr. Schrot of Langen-Leube, in Saxony, borrowed one from a friend, which he copied with his own hand. At the instance of many bee-keepers, he re-arranged the work, and published it, with additions and illustrations, in 1659. This continued to be, in Germany, the leading and most popular work on bees, for nearly two centuries, the last edition of it having appeared in 1753. The copy which we have, is of the third edition, printed at Leipzig in 1700. It is a duodecimo volume of 347 pages, besides title, dedication, prefaces, and index.

Among a number of modern contrivances and manipulations anticipated in this book, the now celebrated comb guide figures quite prominently, being mentioned already in the original work by Jacob. "I mould," says he, "several pieces of soft wax in a longish form, like small tapers, and press them fast in the hive above. This is done not merely that the young bees may the more easily attach their combs, but principally to induce the bees to begin building by rule, not setting the sheets of their work crosswise [irregularly] but lengthwise [straight]. This is a good plan, and not to be disregarded." The experienced bee-keeper will readily see that a piece of soft wax thus moulded and extended would necessarily assume, when pressed by the fingers to the ceiling of the hive, the form of a triangular elevation, ridge or edge. It could not well take any other shape under such manipulation; and thus we have the triangular comb-guide clearly anticipated by more than three hundred years! Mr. Langstroth promptly abandoned his claim to the invention when he ascertained that John Hunter had long ago suggested the device. Clark's patent is invalid on other grounds, but can any one suppose that it could be sustained for a moment, in the face of such clear evidence of the use of guides in the olden time?

Again. The process usually called "Schirach's discovery" of the art of raising queens from worker lavæ, was known to, described, and recommended by Jacob, in 1568. When a colony is suspected or known to be queenless, his advice runs thus:—"As they have honey enough and no brood from which young bees are raised, I cut away three of their combs; then go to a strong colony and cut out two combs having plenty of brood in the cells, taking pieces about a span long and broad. The brood must not be sealed, but be young, fresh and small larvæ. Take along also the adhering bees. Insert these pieces of comb in the

queenless colony in place of those removed, fixing a comb of honey before, near the brood, and an empty one in front of that. The honey will soon cause the bees to fly; they will then cover the brood, and the young bees obtained from the strong stocks, have brought with them the natural qualification, by divine impartation, to labor and produce a new queen in about fourteen days."

Here we have, in pretty accurate detail, the whole art and mystery of artificial queen raising, as it was practiced two centuries before Schirach was born. By the way, Schirach never claimed as a discovery, that which has been so generally ascribed to him. He professed to have found the practice in use among the Lusatian peasantry, and to have merely tested it and recommended its adoption, after bringing it to the notice of bee-keepers and naturalists. Huber mentions these trials as "Schirach's beautiful experiments;" and so, we think, does Bonnet, in his "*Contemplations de la Nature.*" The term "discovery," as applied to them, was first used in the caption of one of Huber's letters, and is undoubtedly an error.

And then, too, in this old book, we find a full description of the surplus honey boxes, which are regarded by some apiarians as a recent invention. A minute account is there given of them, illustrated by a cut, which shows that these boxes were not placed on top, but applied laterally, and the special reasons for this arrangement are clearly stated. Those who wish for swarms are advised not to apply these boxes "till the swarming season is over, because the smaller the hives are then kept the more disposed are the bees to fill them rapidly;"—otherwise apply them early, to "avoid the necessity of deranging the combs in the main hive, and keep the bees from becoming indolent." These "small surplus boxes may at times, also, serve for hiving small swarms."

Unquestionably surplus honey boxes are not of recent introduction, even in this country. They were used and recommended by Col. Fenwick, in Virginia, by Mrs. Griffith, in New Jersey, and by Drs. Thatcher and Smith, in Massachusetts, years before Weeks of Vermont tried to make a *hobby* of them.

☞ To an inquiring correspondent we would say, "to prevent bees from working on fruit," gather it before it is dead ripe and attacked by birds, wasps, and hornets. Plenty of *mischievous children* in the neighborhood is, also, commonly an efficient preventive; and "children of larger growth" are ofttimes serviceable in the same way.

CORRESPONDENCE OF THE BEE JOURNAL.

TOWANDA, ILLS., May 17, 1871.—Our Bee-keepers' Association for this section of the State is a *success*. At a meeting the 1st of this month, we had a pleasant and instructive discussion on various topics interesting to bee-keepers, at this season of the year. One member said, that as he examined his stocks when taking them out of the cellar last February, he found one that had a perfect queen cell. He looked for the queen, but could not find her. Later in the month (Feb. 25th), he found that the young queen had hatched out. Having no drones, he supposed he would have a drone-laying queen. Following up his examinations, he found no eggs until the first of this month (May). I saw him the other day, when he told me his young queen had a large quantity of worker brood ready to hatch. Thus, it seems, she went from the 25th of February to the last of April, before she was impregnated. What will the doctors say to this? Maybe Dr. Gallup can answer.

The season is very dry, and many are losing their bees for want of timely feeding. S. C. WARE.

BORDER PLAINS, IOWA, May 22.—My bees are breeding fast, but have not gathered any honey yet, over their immediate wants, though some are preparing to swarm. G. M. DALE.

NASHVILLE, TENN., May 27.—We are blessed with an abundant crop of white clover, and the largest yield of honey we ever had. Dr. P. W. DAVIS.

EDDYVILLE, IOWA, May 27.—Bees are doing very well here. I have had several swarms. Hoping the Bee Journal may soon come semi-monthly, yours, E. T. WALKER.

LIGHT STREET, PA., May 29.—Bees are doing pretty well here. Had an Italian swarm, April 30th,—early for this latitude. H. H. BROWN.

WILLOW BRANCH, IND., May 29.—My bees are doing a big business in the way of increase this spring. I had twenty-four stands, all nice, to start with this spring. Wintered fine in the Langstroth hive, Italianized last summer, and now have thirty-six at home, besides two that I sold. The increase is mostly by natural swarming, notwithstanding I have been making heavy drafts on them to raise queens, as I had the only Italian bees within ten miles of where I live. Black bees are not swarming yet, though my Italians commenced doing so nearly three weeks ago. I expect to get lots of honey this season, but do not expect to get within gunshot of Novice, as I have too much else to attend to, to use the honey-slinger this season. I am transferring and Italianizing bees in various parts of this county, and have introduced eighteen queens this spring. I have been successful in every case, except one,—which, I think, is doing pretty well for a raw hand. My mode is to scent the bees well with sweetened water, scented with peppermint, either sprinkling the bees with it or the combs, or in the mass as they are run into the hive; then sprinkling the queen with it also, put her in with the bees, and all is well, provided you have taken the old queen away. I would say, further, that the queens that I bought and those I raised last year, so far as I know, were all what Mr. John M. Price would call artificial queens, and they all came through the winter right. And the way they are increasing this spring makes them good enough for me, Mr. Price to the contrary notwithstanding. JONA. SMITH.

WALPOLE, N. H., June 3.—We are having dry weather, but favorable for bees. White clover is coming out, and I have a few very populous colonies that are taking advantage of it. J. L. HUBBARD.

WINCHESTER, VA., June 6.—The bees about here have gathered very little honey, up to this date. It has been so very dry that the white clover, of which there was a very large quantity, has yielded very little honey. I have heard of very few swarms, no black swarms, and only two or three Italians. J. F. BROWN.

WESTFIELD, N. Y., June 8.—Will the bees swarm? My bees (Italian) commenced swarming May 10th, and swarmed as follows: May 10th, one swarm; 12th, one; 15th, one; 18th, two, both second swarms; 20th, three, two were thirds and one a first swarm; 21st, one second; which was the last, notwithstanding I have twenty-five other stocks equally strong.—Now for the secret. The first half of May was very cold; about the time my bees commenced swarming we had frosts, which froze ice as thick as common window glass (apple trees in bloom), and soon after my bees commenced throwing out the drone brood; and about the 20th, many of my strong stocks began a vigorous attack on the drones, and kept it up for several days. Bees had nothing to work upon that was of much account for nearly two weeks, and I was obliged to feed my new swarms. Forage has been plenty for about a week, and the weather very warm,—the thermometer ranging from 80 to 92 in the shade. H. B. ROLFE.

MARSHALL, OHIO, June 9.—The bees in this section of country have not swarmed yet, and I think will not this season. They have stored but very little box honey. C. J. DICK.

TOLONO, ILLS., June 12.—I wintered seventy-two stocks on their summer stands, and all came through all right. All but ten were in framed hives. I lost three this spring, however, in consequence of their losing their queens. While the trees were in bloom, about the 1st of April, the bees did well; but after that time, it became very dry, and for six or eight weeks they did nothing. I fed all my weak swarms last fall; but, for fear they would not have enough, I gave the weakest one or two boxes of honey. They did not touch it until late this spring. White clover came on the 15th of May, but gave no honey till we had rain. Now it is wet enough, and bees are doing well. I have heard of only two swarms yet, and think I shall not have any before the 20th of June. My bees are nearly all Italian. Last year was the poorest year I ever knew in this county. We have two hundred colonies in this village. DR. H. CHAFFEE.

GALESBURG, MICH., June 13.—I am over seventy years of age, and have kept bees over forty years. I have taken your Bee Journal one year, and have learned more about bees in that one year than in all my lifetime before. L. BURDICK.

BUFFALO, N. Y., June 17.—Bees in this section have wintered well, and are doing well so far. MRS. WM. HARRIS.

[From the Crawford (Pa.) Journal]

Artificial Swarming of Bees.

MR. EDITOR:—As I have been requested to give, through the columns of your paper, our method of swarming bees artificially, with your consent, I will proceed to do so. This method of swarming or dividing bees is based upon the well known fact of the bees being able to rear themselves a queen from any worker larvæ, under five days old. Any worker egg or larvæ, which, under ordinary treatment would have produced a worker, is so changed by the peculiar food which they (the bees) supply the young grub, that instead of twenty-one days being required to perfect the insect, it takes but sixteen. On the other hand, the duration of her life is much prolonged. As a worker, she would not live to exceed six months, usually not more than from six to eight weeks in the honey season; as a queen, she will live, if healthy, from three to four years—in rare cases—five years. Why this is so is one of the unexplained mysteries in the physiology of the honey-bee, which has puzzled far wiser heads than mine.

Of the many methods of dividing or swarming bees, I will give but one or two. One of the most common, and at the same time requiring the least skill, is to divide a full stock into two equal parts. To illustrate: Take the Langstroth hive, which contains ten frames; we will call the parent stock No. 1, and the empty hive which is to contain half the combs and bees No. 2. Now, for the process. To subdue or quiet your bees for handling, use dry bark—oak is best. Put two small pieces together, light one end of it, and you will be surprised to see how easily your bees are subdued by the smoke. Set your empty hive along side of the one you wish to divide, containing five empty frames. Remove the upper box or cover and the honey board. Give the bees a few puffs of smoke, which will drive them down among the combs; proceed to loosen the frames and remove five of them to your empty hive. Be sure and notice which hive is in possession of the queen. Spread the combs in the hive in which she is, and insert your empty frames, first a full and then an empty one, thus alternately, till your hive is full. To the queenless hive give no frames until they are in possession of a young queen, which will be from twelve to sixteen days. The reasons for so doing I will not take the time or space to explain here (any one will find this fully explained in Langstroth on the Hive and Honey Bee). Take No. 1 and set it about two feet to the right of the old stand, and No. 2 as far to the left, or right, as the case may be. Notice the hives for a day or two. If one seems to be getting more than its share of bees, move it still farther from the old position, and the other as much nearer. If your hives are alike in shape and color, put some distinguishing mark on the hive that will soon be in possession of a young, virgin queen, for bear in mind, the queen must make at least one, usually several, excursions from the hive in search of a drone before she is capable of fulfilling her functions as the prolific parent of the whole colony. When the young queen leaves her cell, proceed to fill up the hive as above described. If this division of stock is deferred, as it should be, until the season of natural swarming approaches, the old stock may be in possession of queen cells nearly mature. By giving the queenless hive a comb containing a sealed queen cell, it will greatly facilitate our operations.

The above method is little, if any, superior to natural swarming, only that by dividing our bees we make the increase of our colonies a sure thing, provided we succeed in getting a fertile queen in each colony.

We will now describe our favorite method of swarming bees. If we can anticipate or assist nature in her works, I think we are justified in interference. If we cannot do this, or work in accordance with the unchangeable laws by which

bees, as well as all animated creation are governed, we had better not interfere. About three weeks before we wish to swarm our bees, we remove the queens from three or four of our most prosperous colonies, by taking a comb on which the queen is seen, with all the adhering bees. Place this comb in an empty hive to one side. Insert a division board to economize the heat in our little colony. Confine the bees to the hive by tacking a small piece of wire cloth over the entrance. Set the hive containing this small colony, which we will now call a nucleus, wherever you wish it to remain for the season. On the evening of the fourth day remove the wire from the entrance, and allow the bees to fly. A great many will return to the hive on the old stand, but enough will remain to care for the queen during her temporary absence. On the eighth day, after the removal of the queen, give the hive a thorough examination, to see how many queen cells you have at your disposal. The ninth day, for every queen cell that can be removed without injury, form a nucleus, minus those in possession of the old queens. Be very careful when forming those miniature colonies that you do not remove the queens from the old stock. Confine the bees as above described, and liberate on the evening of the fourth day. On the tenth day proceed to cut out the queen cells. In doing this it is best to cut round the cell an inch or more, so as to avoid cutting into them. Be very careful not to jar or jam them in any way. Cut a like place in the comb of each nucleus, just large enough to receive the cell, and hold it in place. Put the cell so it will hang in the same position it did before removal. Take the old queens from the nucleus (giving each of them—the nuclei—a cell), and restore them to the old hives from which you have removed the cells. To do this, confine them in what we call a queen cage, made by taking a piece of wire cloth, (No. 10 is a very good size for this purpose) and bend it round your finger and press one end together. Confine the queen by stopping up the opposite end with a paper wad. Put the cage through the top bars of the frames in the centre of the hive, and leave her there confined for forty-eight hours, at the end of which time she is usually well received. By carefully removing the paper from the end of the cage, if the weather has been favorable, nearly all your nuclei will be found to be in possession of a fertile queen, by the time the white clover comes into blossom. This is the time we swarm our bees, so they will have ample time to fill their hives, and if the season is favorable, store a nice lot of surplus honey. Two or three days before swarming our bees, if any of our nuclei have not bees enough, we strengthen them by taking a comb or two from some of our strongest and most prosperous colonies, and shake or brush the bees from the comb a foot or so in front of the nucleus we wish to aid. The old bees will return to the parent stock. The young bees never having flown from the hive, knowing no other home, will enter the nucleus. When we wish to swarm our bees, we take a set of empty frames to any hive that is strong in numbers, which we will call No. 1. Open the hive and smoke the bees as above described. Lift out the frames one by one till you find the queen. Set the comb on which she is seen to one side, with all the adhering bees; then shake or brush the bees off of the rest of the comb in front of the hive. Proceed in this way till you have all the bees in the front of the hive on the old stand. Take the comb on which the queen was seen, place it in the centre of the hive with all the adhering bees, and fill up the space on either side with your empty frames; now, take the No. 1 brood combs to one of your nuclei, No. 2. Remove the division board, place the comb of the nucleus in the centre of the hive and fill up the hive with the combs taken from No. 1, these combs containing brood in all stages of development, from the egg to the fully developed bees just emerging from their cells. No. 2 will soon be almost as populous as hive No. 1 before the removal of the combs. The bees in No 1 remaining on the old stand are not confused by a change of position, and will proceed to build comb in every respect like a natural swarm. We have had swarms, made in this way, store 75 pounds in boxes, besides an abundance for winter needs.

By the above method of artificial swarming, we avoid the trouble, vexation and delay, to say nothing of the danger of introducing queens to strange bees, as each colony retains possession of its own queen respectively. Some may say, "I fail to see where this last method of swarming is superior to that first described." Patience, friends, and I will endeavor to explain wherein it is superior. In natural swarming the first or prime swarm leaves about the time the queen cells are sealed over. Eight days after the cells are closed up the young queen is ready to leave her cell. It is usually from five to six days before she leaves the hive in search of a drone, and from two to three days after this, if successful, before she begins laying eggs, making fifteen days at least that the parent hive is without a laying queen, to say nothing about the delay caused by after swarming and bad weather. A prolific queen will lay from two to three thousand eggs per day, but we will put it at the first figures of two thousand per day, making an increase of thirty thousand bees, a very large swarm, which, if the season is favorable, is equivalent to thirty pounds of honey, at a very modest estimate; selling our honey at 25 cents per pound (often 30 to 35), it amounts to $7.50 over and above what we would have secured had we let our bees swarm naturally. Thus you see it pays us for our extra trouble. Our bees began swarming the 12th of this month. Who can beat this, this season? If any man who reads this has a more successful method of swarming bees than I have endeavored to describe, I for one would be happy to hear from him.

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Vigilance and neatness are for ever in requisition, and the care of bees, like all other profitable business, cannot be pursued to any advantage unless it receive daily and minute attention.